DEVELOPMENT SERVICES DEPARTMENT
ENVIRONMENTAL COORDINATOR
450 110th Ave NE., P.O. BOX 90012
BELLEVUE, WA 98009-9012

OPTIONAL DETERMINATION OF NON-SIGNIFICANCE (DNS) NOTICE MATERIALS

The attached materials are being sent to you pursuant to the requirements for the Optional DNS Process (WAC 197-11-355). A DNS on the attached proposal is likely. This may be the only opportunity to comment on environmental impacts of the proposal. Mitigation measures from standard codes will apply. Project review may require mitigation regardless of whether an EIS is prepared. A copy of the subsequent threshold determination for this proposal may be obtained upon request.

File No. 21-122155-LO

Project Name/Address: COBT - 98th Ave SE and SE 11th St Slope Stabilization / 9600 SE 11th Street

Planner: Drew Folsom
425-452-4441
dfolsom@bellevuewa.gov

Minimum Comment Period: December 23, 2021

Materials included in this Notice:

- ☑ Blue Bulletin
- ☑ Checklist
- ☑ Vicinity Map
- ☑ Plans
- ☑ Other: Notice of Section 4(f) de minimis Finding

OTHERS TO RECEIVE THIS DOCUMENT:

- ☑ State Department of Fish and Wildlife
- ☑ State Department of Ecology, Shoreline Planner N.W. Region
- ☑ Army Corps of Engineers
- ☑ Attorney General
- ☑ Muckleshoot Indian Tribe

Development Services

SEPA Environmental Checklist

The City of Bellevue uses this checklist to help determine whether the environmental impacts of your proposal are significant. This information is also helpful to determine if available avoidance, minimization or compensatory mitigation measures will address the probable significant impacts or if an environmental impact statement will be prepared to further analyze the proposal.

Instructions

The checklist asks you to describe some basic information about your proposal. Please answer each question accurately and carefully and to the best of your knowledge. You may need to consult with an agency specialist or private consultant for some questions.

You may respond with “Not Applicable” or "Does Not Apply" only when you can explain why it does not apply and not when the answer is unknown. You may also attach or incorporate by reference additional studies and reports. Please make complete and accurate answers to these questions to the best of your ability in order to avoid delays. For assistance, see SEPA Checklist Guidance on the Washington State Department of Ecology website.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The city may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Background

1. Name of proposed project, if applicable 98th Avenue SE & SE 11th St Slope Stabilization
2. Name of applicant City of Bellevue, Transportation Department
3. Contact person Kenny Booth, The Watershed Compnay Phone 425-822-5242
4. Contact person address 750 Sixth Street South Kirkland, WA 98033
5. Date this checklist was prepared 9/13/2021
6. Agency requesting the checklist City of Bellevue

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12/2/21

7. Proposed timing or schedule (including phasing, if applicable)

The proposed road repairs would commence upon receipt of all permits and approvals.

8. Do you have any plans for future additions, expansion or further activity related to or connected with this proposal? If yes, explain.

Not at this time.

9. List any environmental information you know about that has been prepared or will be prepared, that is directly related to this proposal.

Wetland and Stream Delineation Report, The Watershed Company, June 2021
Arborist Report, The Watershed Company, June 2021
Critical Areas Narrative, The Watershed Company, Sept. 2021
Report of Geotechnical Engineering Services, NV5, August 2021
Drainage Report, Lochner, 2021

10. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

None that are known.

11. List any government approvals or permits that will be needed for your proposal, if known.

Critical Areas Land Use Permit - City of Bellevue
Clearing and Grading Permit - City of Bellevue
Right of Way Permit - City of Bellevue
Utility Extension Agreement - City of Bellevue
NEPA - WSDOT

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12/2/21

12. Give a brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)

The intersection of 98th Avenue SE (97th Place SE) and SE 11th Street is located on a slope that has a long history of movement. Heavy rain events in January and February of 2020 resulted in settlement of the shoulder on the south side of SE 11th Street at 97th Place SE. The City completed an emergency interim repair of the shoulder in April 2020 in order to reopen the road. The permanent fix calls for a wall on the west side of 98th Avenue SE (97th Place SE) and on the south side of SE 11th Street to stabilize the slope. The project also requires collecting stormwater from slopes on the east side of 98th Avenue SE/97th Place SE to prevent future saturation of the slopes during storm events. Other improvements and work associated with the slope stabilization include, but are not limited to, site preparation, erosion and sediment control, storm drainage improvements, environmentally sensitive area impact mitigation, paving/overlay, channelization, staging, traffic control, and other mitigation as required. The major features of the project include: Designing a new soldier pile wall or an equivalent wall system at the southwest corner of the 98th Avenue SE (97th Place SE) and SE 11th Street intersection to prevent further moving of the slope and prevent undermining the roadway; and evaluating and design stormwater collection system to collect water from slopes on the east side of 98th Avenue SE and 97th Place SE to prevent future saturation of the slopes

13. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and the section, township and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

The project site is located within a portion of the eastern border of the City of Bellevue's Chism Beach Park (parcel #5627300005) and the adjacent public right-of-way near the intersection of 98th Avenue SE and SE 11th Street in section 06, township 24 north, range 05 east.

Environmental Elements

Earth

1. General description of the site:
   - ☐ Flat
   - ☐ Rolling
   - ☐ Hilly
   - ☑ Steep Slopes
   - ☐ Mountainous
   - ☐ Other _____
2. What is the steepest slope on the site (approximate percent slope)? >40%

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12/2/21

3. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.

According to Natural Resources Conservation Service (NRCS) soil maps, Kitsap silt loam, 15 to 30 percent slopes is mapped throughout project area. Aocording to the NV5 report, the area contains recently placed fill underlain by recent landslide deposits composed of soft to medium stiff, silty clay of glaciolacustrine origin overlying dense glaciofluvial material.

4. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

Yes, the roadway at the intersection of 98th Avenue SE and SE 11th Street has a history of instability. The proposed project will address this instability.

5. Describe the purpose, type, total area and approximate quantities and total affected area of any filling, excavation and grading proposed. Indicate the source of the fill.

The proposed improvements will stabilize a portion of the 98th Ave SE and SE 11th Street right-of-way (ROW) that is impacted by a landslide along the west edge of the road. The area behind the proposed shoring wall will be filled to stabilize the ROW area and create a shoulder area so that future slope movement downhill of the road will not impact the ROW. Approximately 350 cubic yards of fill will be added along the backside of the wall and up to level of the ROW with the road. Fill will be backfill material placed behind the retaining wall and extend halfway up the retaining wall height. Imported granular material used for structural fill behind the wall should be naturally occurring pit- or quarry-run rock, crushed rock, or crushed gravel and sand and should meet the specifications provided in WSS 9-03.14(1) (Gravel Borrow). Material would be sourced from a WSDOT approved borrow pit and meet gradation or performance requirements. The granular wall backfill will be separated from general fill, native soil, and/or topsoil using a geotextile fabric. Permanent cut or fill slopes would not exceed a gradient of 2H:1V, unless specifically evaluated for stability. Slopes that will be maintained by mowing should not be constructed steeper than 3H:1V, and will be planted with appropriate vegetation to provide protection against erosion as soon as possible after grading.

6. Could erosion occur as a result of clearing, construction or use? If so, generally describe.

Limited erosion could occur due to exposed soils and soil import activities. However, appropriate temporary erosion control BMPs would be employed as needed.

7. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)? 2,663 SF of new imperious surface is proposed.

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12/2/21

8. Proposed measures to reduce or control erosion, or other impacts to the earth, if any.

Temporary erosion control BMPs would be employed as needed. An erosion and sediment control plan can be seen on Sheet SP01.

Air

1. What types of emissions to the air would result from the proposal during construction, operation and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.

During construction, emissions to the air including equipment exhaust and dust could result from construction vehicles/equipment. These emissions would be temporary and rapidly dissipated.

2. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

There are no known off-site sources of emissions or odor that may affect the proposal.

3. Proposed measures to reduce or control emissions or other impacts to air, if any.

Standard methods of reducing impacts to air would be employed, including managing exposed soils.

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Water

1. Surface Water
   a. Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

Yes. The project will occur uphill from Lake Washington. There are three depressional wetlands and one slope wetland located within the project area. There is one additional depressional wetland and one additional slope wetland located adjacent to, but outside of the project area.

   b. Will the project require any work over, in or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

Yes, the proposed work will occur within 200 feet of the above described wetlands. However, all work would occur more than 200 feet from Lake Washington.

   c. Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of the fill material.

No fill or dredge material will be placed or removed from surface waters or wetlands. Approximately 350 cubic yards of fill will be added along the backside of the wall and to level of the ROW with the road.

   d. Will the proposal require surface water withdrawals or diversions? Give a general description, purpose and approximate quantities, if known.

No.

   e. Does the proposal lie within a 100-year floodplain? No
   If so, note the location on the site plan.

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12/2/21

f. Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

No intentional discharges of waste materials to surface waters would occur during restoration activities. All appropriate BMPs would be implemented to prevent such discharges.

2. Ground Water

a. Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.

There will be no withdrawal of, or discharge to, ground water associated with implementation of the proposed project.

b. Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals…; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

There will be no waste material from septic tanks or other sources discharged into the ground as part of the proposed project.

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12/2/21

3. Water Runoff (including stormwater)
   a. Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

Runoff from upstream areas of 98th Ave SE and 11th Street SE are collected in a catch basin to be located at the intersection and routed into the existing storm drain system in 98th Street SE. Surface runoff in this area is primarily from 98th Ave SE which is an existing paved road with a low traffic volume, but runoff also includes flow from several single family residences in the immediate vicinity. A curtain drain will intercept groundwater flow upstream of the retaining wall. Seepage collected by this curtain drain will be routed to the existing storm drain system in 98th Ave SE. A toe drain will also collect groundwater near the retaining wall and route the collected seepage to the existing storm drain system in 11th Street SE. The existing storm drain systems in 98th Ave SE and 11th Street SE both outflow to Lake Washington. No new sources of water runoff are proposed as part of the project. Runoff quantities and flow patterns are not expected to change markedly from the pre-existing condition.

   b. Could waste materials enter ground or surface waters? If so, generally describe.

During construction activities, fuel, lubricant or other material spills from equipment could enter ground or surface waters. However, spill cleanup equipment would be present on-site during construction activities.

   c. Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.

The project will collect runoff from an existing section of 98th Ave SE and route it to the existing outlet point using a closed storm drain system rather than surface runoff over the asphalt paving. This change will not affect drainage patterns outside the project area. The curtain drain will cut off groundwater flow in the vicinity of the unstable slopes and route it to the existing storm drain system, but will not affect surface drainage patterns. Drainage patterns will not be altered as a result of the proposed project.

Indicate any proposed measures to reduce or control surface, ground and runoff water, and drainage pattern impacts, if any.

No additional permanent measures beyond those described above. Temporary erosion control BMPs would be employed as needed during construction.

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12/2/21

Plants

1. Check the types of vegetation found on the site:

- [x] deciduous tree: alder, maple, aspen, other ash
- [x] evergreen tree: fir, cedar, pine, other _____
- [x] shrubs
- [ ] grass
- [ ] pasture
- [ ] crop or grain
- [ ] orchards, vineyards or other permanent crops
- [x] wet soil plants: cattail, buttercup, bulrush, skunk cabbage, other _____
- [ ] water plants: water lily eelgrass, milfoil, other _____
- [ ] other types of vegetation _____

2. What kind and amount of vegetation will be removed or altered?

Approximately eleven trees will be removed as part of the project.

3. List any threatened and endangered species known to be on or near the site.

No such plant species are known to occur within the project site.

4. Proposed landscaping, use of native plants or other measures to preserve or enhance vegetation on the site, if any.

The native plant restoration area totals approximately 3,150 square feet. Proposed native species include Pseudotsuga menziesii (Douglas-fir), Thuja plicata (western red cedar), Ooemlaria cerasiformis (osoberry), Ribes sanguinium (red-flowering currant), Rosa nutkana (nootka rose), Rubus spectabilis (salmonberry), Gaultheria shallon (salal), Mahonia nervosa (dull Oregon grape), and Polystichum munitum (sword fern). Plantings represent a diverse native plant assemblage appropriate to the eco-region and consistent with backfill and soil stability parameters.

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12/2/21

5. List all noxious weeds and invasive species known to be on or near the site.

Reed canarygrass, Himalayan blackberry, English ivy, and Herb Robert have been observed within the project vicinity.

Animals

1. List any birds and other animals which have been observed on or near the site or are known to be on or near the site. Examples include:

   Birds: ☑hawk, ☐heron, ☑eagle, ☑songbirds, ☐other _____

   Mammals: ☑deer, ☐bear, ☐elk, ☐beaver, ☐other _____

   Fish: ☐bass, ☐salmon, ☐trout, ☐herring, ☐shellfish, ☐other _____

2. List any threatened and endangered species known to be on or near the site.

No such plant species are known to occur within the project site.

3. Is the site part of a migration route? If so, explain.

Migrating waterfowl may use Lake Washington as resting and foraging areas during spring and fall migrations.

4. Proposed measures to preserve or enhance wildlife, if any.

The proposed 3,150 square feet of native restoration plantings will provide increased habitat functions for wildlife.

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12/2/21

5. List any invasive animal species known to be on or near the site.

There are no known invasive animal species within the project vicinity.

Energy and Natural Resources

1. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

The project will not change the current energy use of any properties.

2. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

The project will not affect the potential use of solar energy by adjacent properties.

3. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any.

None proposed.

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12/2/21

Environmental Health

1. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill or hazardous waste, that could occur as a result of this proposal? If so, describe.

No environmental health hazards are expected to occur as a result of this proposal.

a. Describe any known or possible contamination at the site from present or past uses.

None known.

b. Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.

None known.

c. Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.

Diesel fuel may be used during project construction for the operation of equipment. No toxic or hazardous chemicals will be stored, used, or produced by the completed project.

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12/2/21

d. Describe special emergency services that might be required.

None anticipated.

e. Proposed measures to reduce or control environmental health hazards, if any.

None necessary. No environmental health hazards are expected to occur as a result of this project.

2. Noise

a. What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

Noise in the vicinity of the project area is typical of a park and residential area and is not expected to affect the project.

b. What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

Construction activities would generate short-term noise during allowed work hours.

c. Proposed measures to reduce or control noise impacts, if any.

Noise would be limited to normal, daytime working hours pursuant to Bellevue City Code 9.18.

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12/2/21

Land and Shoreline Uses

1. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.

   The site is currently a roadway and the adjacent properties include right-of-way, residential, and the City's Chism Beach Park. The proposal will not affect the current use of the site or the uses of nearby properties.

2. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to non-farm or non-forest use?

   No.

   a. Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling and harvesting? If so, how?

      No.

3. Describe any structures on the site.

   There are no buildings or structures on site. The nearest residence is less than 200 feet east.

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12/2/21

4. Will any structures be demolished? If so, what?

No.

5. What is the current zoning classification of the site? Residential Single Family

6. What is the current comprehensive plan designation of the site? R-2.5 Single-Fam. Residential

7. If applicable, what is the current shoreline master program designation of the site?

Not applicable.

8. Has any part of the site been classified as a critical area by the city or county? If so, specify.

The project area is located on a steep slope exceeding 40 percent and is therefore regulated as a critical area. The Critical Areas Narrative was prepared by The Watershed Company, August 2021.

9. Approximately how many people would reside or work in the completed project? None

10. Approximately how many people would the completed project displace? None

11. Proposed measures to avoid or reduce displacement impacts, if any.

Not applicable.

12. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any.

Not applicable.

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12/2/21

13. Proposed measures to ensure the proposal is compatible with nearby agricultural and forest lands of long-term commercial significance, if any.

Not applicable.

Housing

1. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

None.

2. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

None.

3. Proposed measures to reduce or control housing impacts, if any.

None.

Aesthetics

1. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

The tallest height above grade of the proposed barrier/railing will be approximately 4 feet. No building structures are proposed.

2. What views in the immediate vicinity would be altered or obstructed?

None.

D. Folsom
12/2/21

3. Proposed measures to reduce or control aesthetic impacts, if any

None.

Light and Glare

1. What type of light or glare will the proposal produce? What time of day would it mainly occur?

None.

2. Could light or glare from the finished project be a safety hazard or interfere with views?

No.

3. What existing off-site sources of light or glare may affect your proposal?

None.

4. Proposed measures to reduce or control light and glare impacts, if any.

None.

Recreation

1. What designated and informal recreational opportunities are in the immediate vicinity?

Chism Beach Park is in the immediate project vicinity.

2. Would the proposed project displace any existing recreational uses? If so, describe.

No. Impacts to the Chism Beach Park property would be temporary and limited to the extreme northeast corner - outside of any active use areas. Vehicular access to the park may be temporarily restricted during construction.

D. Folsom
12/2/21

3. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any.

None. The project would not permanently impact recreational opportunities.

Historic and Cultural Preservation

1. Are there any buildings, structures or sites located on or near the site that are over 45 years old listed in or eligible for listing in national, state or local preservation registers located on or near the site? If so, specifically describe.

Burrows Cabin, Bellevue's oldest surviving structure built in 1883 is approximately 550 feet west of the project site. The Civil War era cabin was transported from its former location to Chism Beach Park in 2016. The project will not impact the structure.

2. Are there any landmarks, features or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.

No.

3. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.

Methods used to assess the potential impacts to cultural and historic resources includes review of the Washington Department of Archaeology and Historic Preservation Wissard online map, as reviewed on 8/10/2021.

D. Folsom
12/2/21

4. Proposed measures to avoid, minimize or compensate for loss, changes to and disturbance to resources. Please include plans for the above and any permits that may be required.

Although there will be no impacts to known historic above-ground or archaeological resources on the site, there is always the potential for discovery of unknown and/or uninventoried materials. Should historic, archeological, scientific or cultural significant items be encountered during implementation of this project, work would be temporarily stopped while the appropriate agencies are notified.

Transportation

1. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any.

The site can only be accessed from 98th Ave SE, via 99th Ave SE from the north or 100th Ave SE from the south.

2. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?

The nearest transit stop is located at Bellevue Way SE and SE 10th Street, approximately 0.7 miles from the project site.

3. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate?

None.

4. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).

Landsliding has undermined a portion of the road and slope deformation next to the ROW has resulted in several feet of downslope horizontal and vertical movement. The proposed project includes road repairs which will stabilize the road and slope.

D. Folsom
12/2/21

5. Will the project or proposal use (or occur in the immediate vicinity of) water, rail or air transportation? If so, generally describe.

No.

6. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and non-passenger vehicles). What data or transportation models were used to make these estimates?

The project will not generate any new vehicular trips.

7. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.

No.

8. Proposed measures to reduce or control transportation impacts, if any.

The design will be forward compatible with the City of Bellevue Pedestrian & Bicycle Transportation Plan. Temporary lane closures may occur during construction; however, no permanent impacts to transportation will result from the project. Rather, the project will help to ensure the viability of the existing roadway.

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12/2/21

Public Service

1. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe.

No.

2. Proposed measures to reduce or control direct impacts on public services, if any.

Not applicable.

Utilities

1. Check the utilities currently available at the site:
   - ☐ Electricity
   - ☐ natural gas
   - ☐ water
   - ☐ refuse service
   - ☐ telephone
   - ☐ sanitary sewer
   - ☐ septic system
   - ☐ other

2. Describe the utilities that are proposed for the project, the utility providing the service and the general construction activities on the site or in the immediate vicinity which might be needed.

Not applicable

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12/2/21

Signature

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature 

Name of signee Kenny Booth, AICP

Position and Agency/Organization Senior Planner, The Watershed Company

Date Submitted

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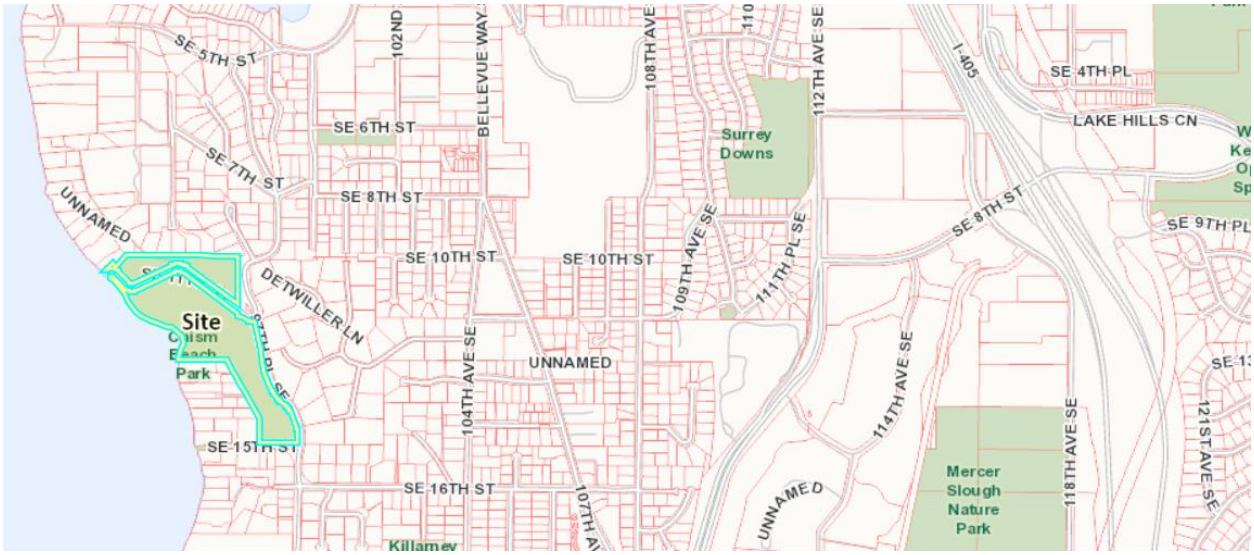
12/2/21

Vicinity Map



CITY OF BELLEVUE
TRANSPORTATION DEPARTMENT

98TH AVE SE AND SE 11TH ST SLOPE STABILIZATION PROJECT

CITY MANAGER
BRAD MIYAKE

MAYOR
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DIRECTOR OF TRANSPORTATION
ANDREW SINGELAKIS

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JEREMY BARKSDALE
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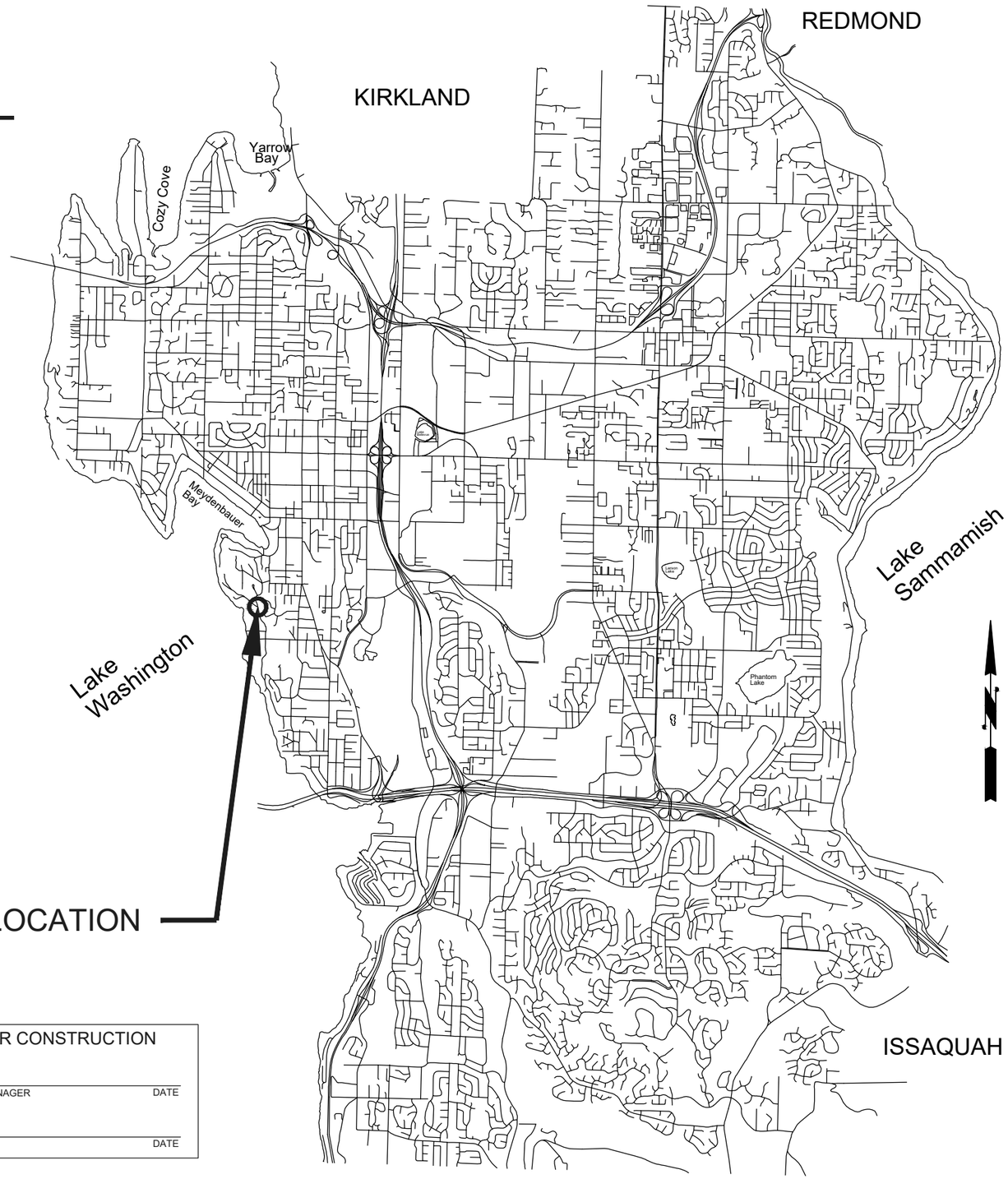
SCHEDULE OF DRAWINGS



APPROVED FOR CONSTRUCTION

TRANSPORTATION DESIGN MANAGER DATE

PROJECT MANAGER DATE

C.I.P. NUMBER PW-M-19
BID NUMBER XXXXX
FEDERAL AID NUMBER ER-2003(083)

CONSTRUCTION LEGEND

X	CONSTRUCTION NOTE
SX	SIGN NOTE
X	DRAINAGE NOTE
X	WATER NOTE
X	CHANNELIZATION NOTE
X	SITE PREPARATION NOTE
X	TRAIL/SIDEWALK LAYOUT POINT
RX	CURB RETURN DATA POINT
—+—	CONSTRUCTION CENTERLINE
— — — —	CITY OF BELLEVUE RIGHT-OF-WAY
————	PROPERTY LINE
- - - - - - - - - -	EASEMENT LINE
—— CUT ——	APPROX. CUT LINE
—— FILL ——	APPROX. FILL LINE
——CG——	APPROX. CLEAR AND GRUB LIMITS
═══	CURB
	ROCK WALL
——P——	POWER LINE
——SD——	STORM DRAIN
——W——	WATER LINE
——SS——	SANITARY SEWER
——G——	GAS LINE
——COM——	COMMUNICATION LINE
——UGT——	TELEPHONE LINE (UNDERGROUND)
——UGTV——	CABLE TV LINE (UNDERGROUND)
——UGFO——	FIBER OPTIC CABLE (UNDERGROUND)
—— UP ——	UNDERGROUND POWER
—— UT ——	UNDERGROUND COMMUNICATION
—SD 6" PVC—	6" PVC STORM DRAIN
— SD 12" DI —	12" DUCTILE IRON STORM DRAIN
——HVF——	HIGH VISIBILITY FENCE
—SF—SF—	HIGH VISIBILITY SILT FENCE
—○—○—	WATTLE
	NEW WALL
	PAVEMENT REMOVAL / NEW FULL DEPTH HMA
	GRIND AND OVERLAY
	GRAVEL BORROW

EXISTING	PROPOSED	
		WOOD FENCE
		SIGN
		UTILTY POLE
P		POWER VAULT
Ⓢ		SANITARY SEWER MANHOLE
		CATCH BASIN TYPE 1
		CATCH BASIN TYPE 2
		CATCH BASIN TYPE 2 WITH SOLID LID
		CLEANOUT
		FIRE HYDRANT
		WATER METER
		WATER VALVE
		GAS VALVE
		CABLE TELEVISION OR TELEPHONE RISER
		DECIDUOUS TREE
		SHRUB
		CONIFEROUS TREE
		STREET LIGHT
		MONUMENT CASE AND COVER

GENERAL NOTES

1. CALL UTILITIES UNDERGROUND LOCATION CENTER AT 1-800-424-5555 A MINIMUM 48 HOURS PRIOR TO CONSTRUCTION.
2. THE CONTRACTOR SHALL POTHOLE ALL POTENTIAL CONFLICTS WITH UTILITIES TO VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF THE EXISTING UTILITIES. POTHOLING INFORMATION OBTAINED DURING DESIGN CAN BE FOUND IN APPENDIX G OF THE PROJECT SPECIFICATIONS.
3. CONTRACTOR TO COORDINATE WITH UTILITY PROVIDES ON EXISTING UTILITY LINE AND STRUCTURE RELOCATION AND ADJUSTMENTS.
4. TO THE EXTENT PRACTICAL, PROVIDE PROTECTION AND RETAINAGE OF EXISTING TREES, BUSHES, AND ROOT SYSTEMS THAT WILL REMAIN AFTER CONSTRUCTION.

LOCHNER

NO.	DATE	BY	APPR.	REVISIONS

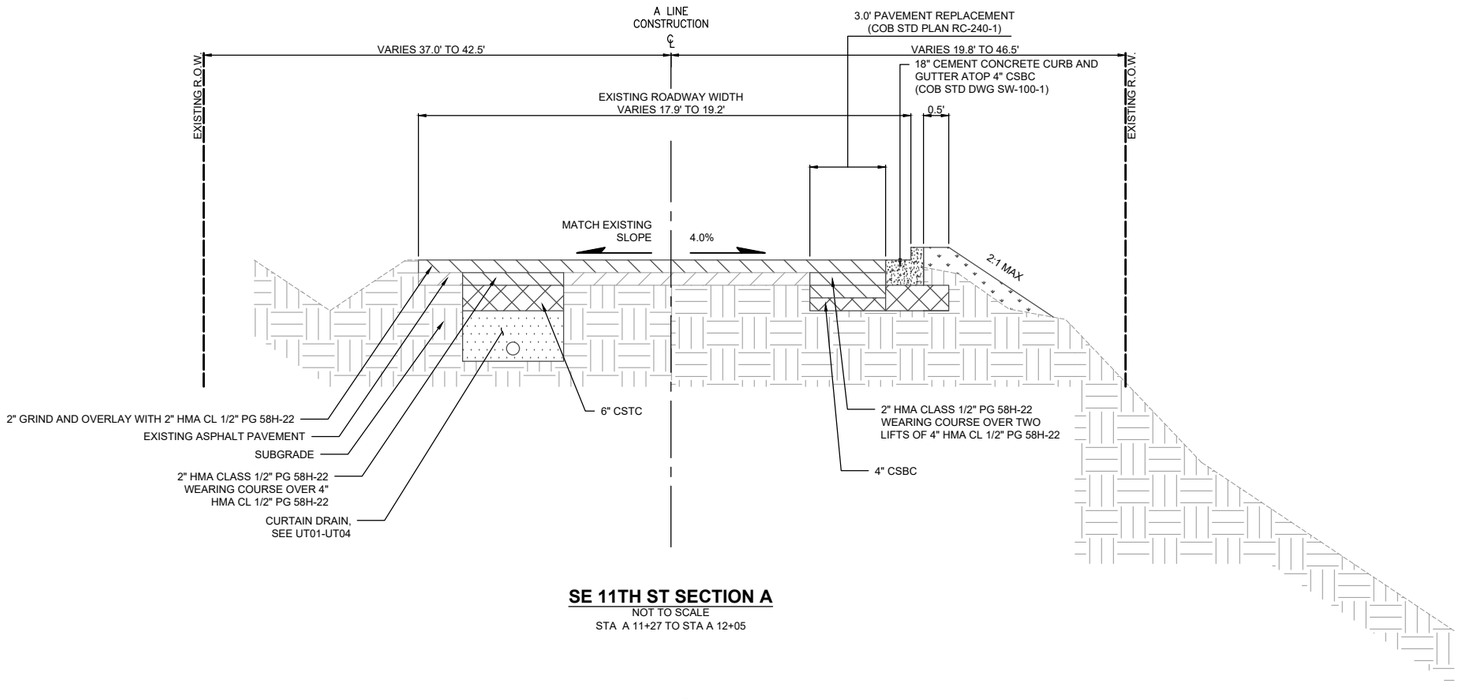
C. NEAL 10/21
DESIGNED BY DATE
C. NEAL 10/21
DRAWN BY DATE
J. TUTTLE 10/21
CHECKED BY DATE

City of Bellevue
Transportation Department

98TH AVE SE AND SE 11TH ST SLOPE STABILIZATION PROJECT

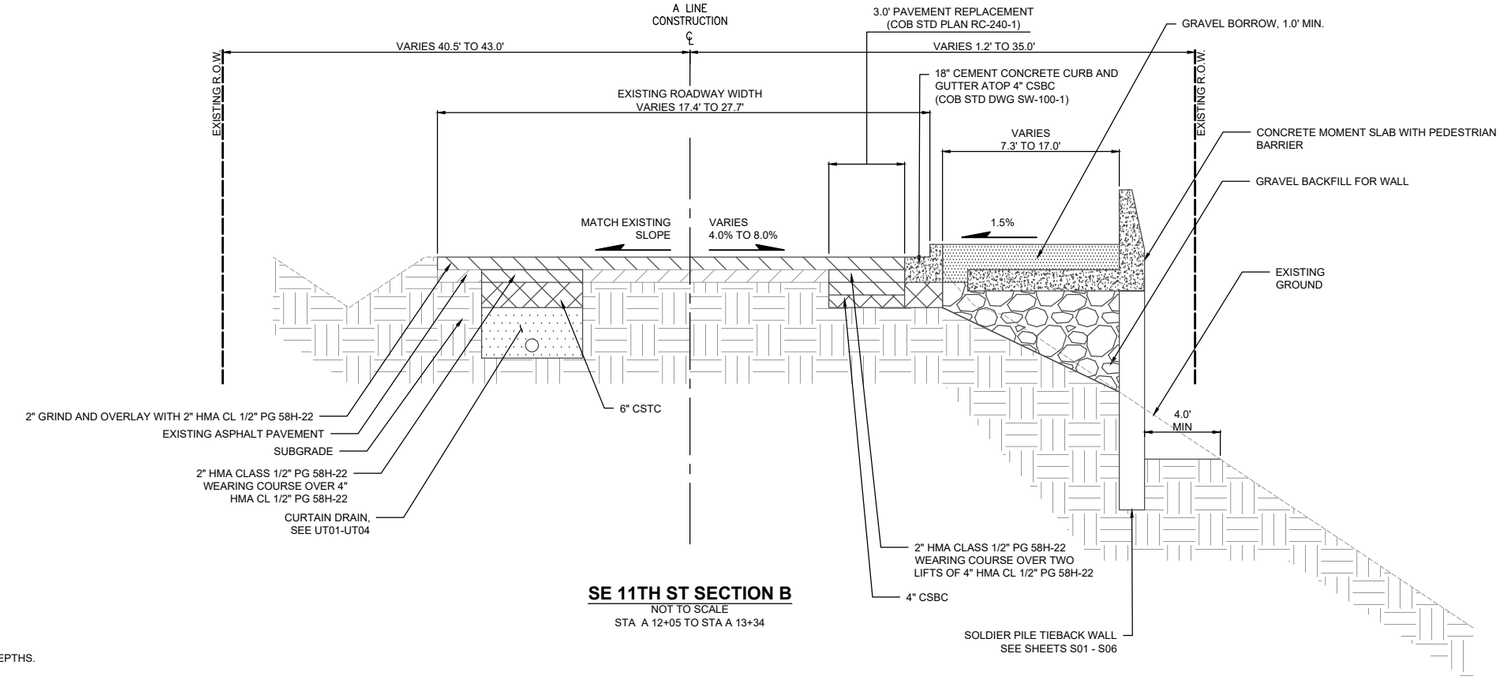
LEGEND & GENERAL NOTES

GEN01 SHT 2 OF X



SE 11TH ST SECTION A

NOT TO SCALE
STA A 11+27 TO STA A 12+05



SE 11TH ST SECTION B

NOT TO SCALE
STA A 12+05 TO STA A 13+34

LEGEND

- NEW HMA
- EXISTING HMA
- CSBC
- CONCRETE
- GRAVEL BACKFILL FOR WALL
- GRAVEL BORROW
- EXISTING SUBGRADE
- COMMON BORROW

GENERAL NOTES

1. ALL DEPTHS ARE COMPACTED DEPTHS.

LOCHNER

NO.	DATE	BY	APPR.	REVISIONS

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C. NEAL 10/21 DRAWN BY DATE
J. TUTTLE 10/21 CHECKED BY DATE

City of Bellevue
Transportation Department

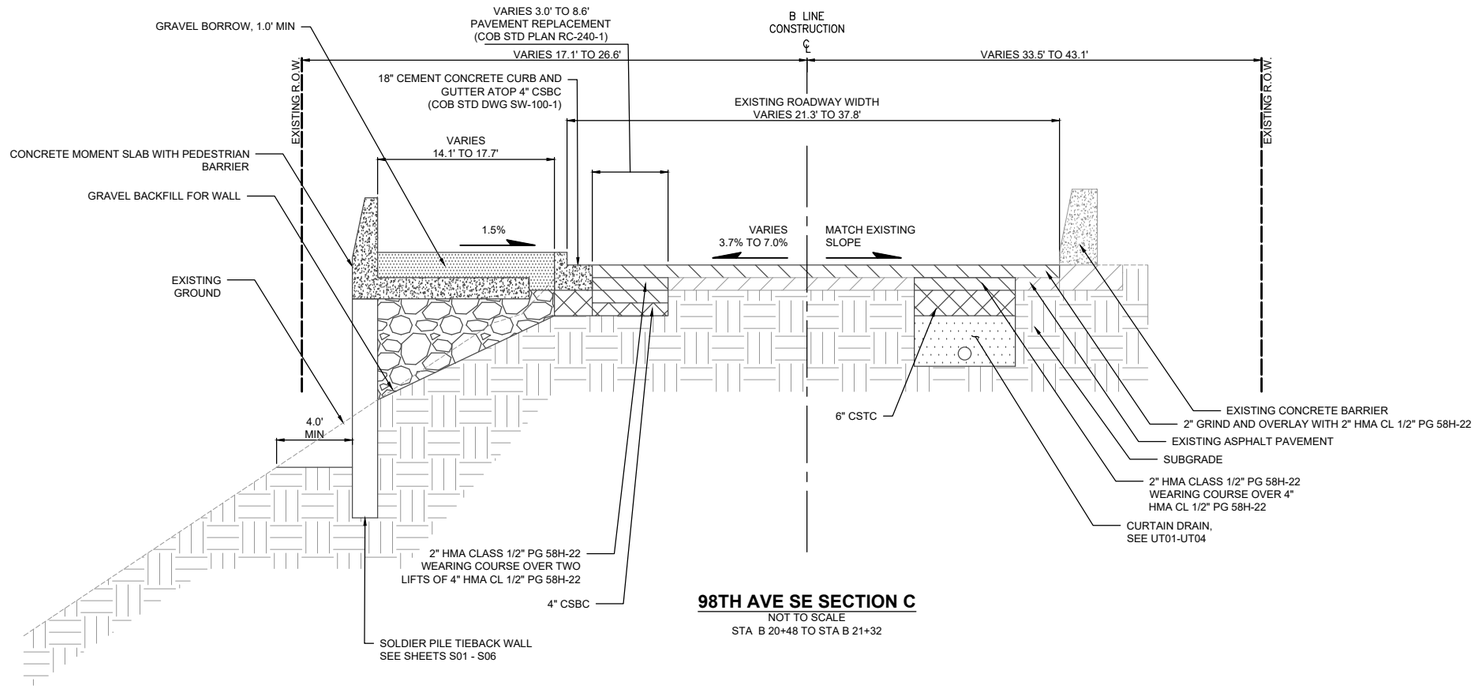
CHRISTOPHER DAVIS STATE OF WASH 53225 REGISTERED PROFESSIONAL ENGINEER PRELIMINARY

98TH AVE SE AND SE 11TH ST SLOPE STABILIZATION PROJECT

TYPICAL SECTIONS

TS01

SHT 3 OF X



98TH AVE SE SECTION C
NOT TO SCALE
STA B 20+48 TO STA B 21+32

LEGEND

- NEW HMA
- EXISTING HMA
- CSBC
- CONCRETE
- GRAVEL BACKFILL FOR WALL
- GRAVEL BORROW
- EXISTING SUBGRADE

GENERAL NOTES

1. ALL DEPTHS ARE COMPACTED DEPTHS.

LOCHNER

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City of Bellevue
Transportation Department

CHRISTOPHER DAVIS
STATE OF WASHINGTON
PRELIMINARY
53225
REGISTERED
PROFESSIONAL ENGINEER

98TH AVE SE AND SE 11TH ST SLOPE STABILIZATION PROJECT

TYPICAL SECTIONS

TS02

SHT 4 OF X

SURVEY CONTROL & ALIGNMENT STAKING DATA

SURVEY CONTROL POINTS

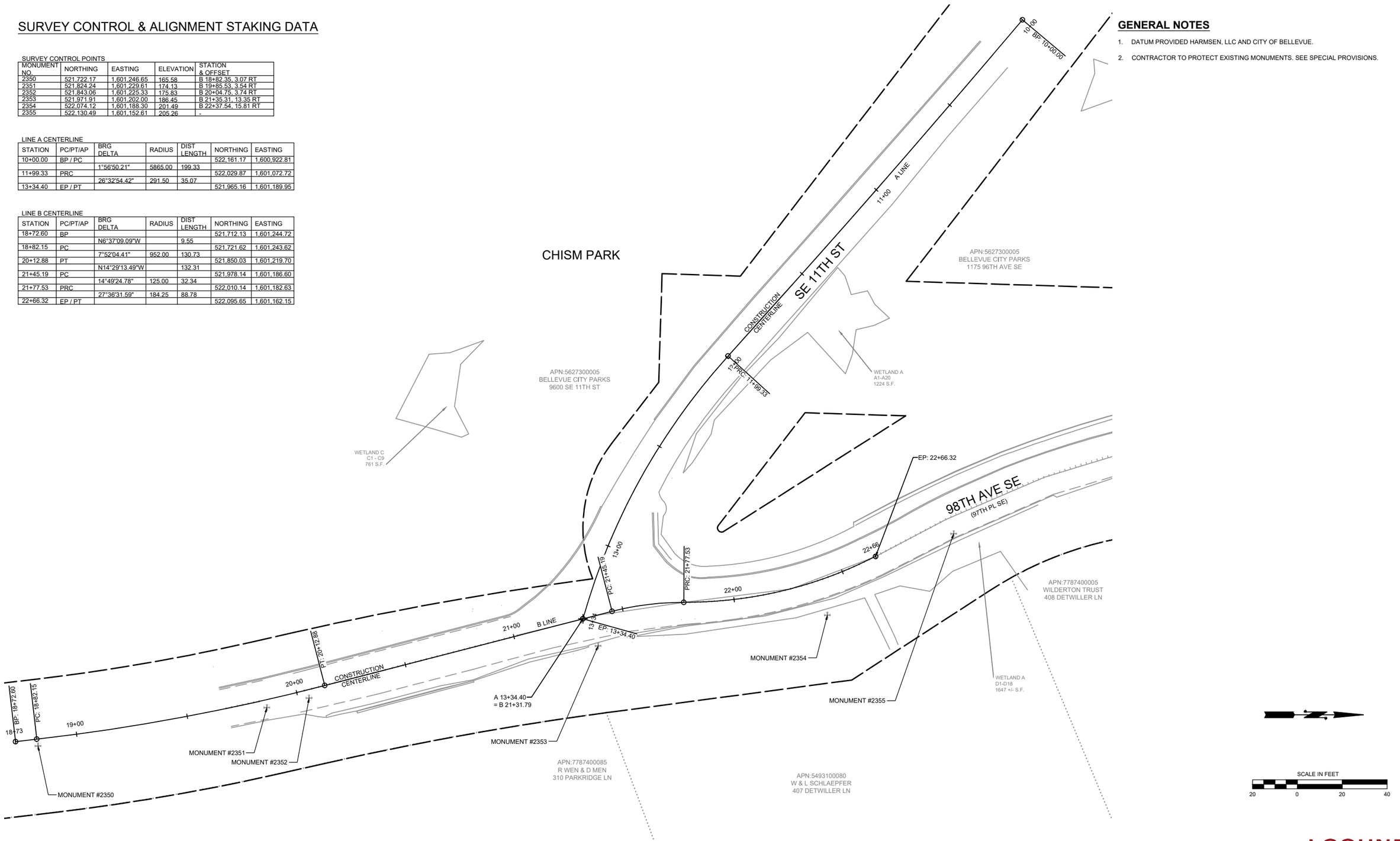
MONUMENT NO.	NORTHING	EASTING	ELEVATION	STATION & OFFSET
2350	521,722.17	1,601,246.65	165.58	B 18+82.35, 3.07 RT
2351	521,824.24	1,601,229.61	174.13	B 19+85.53, 3.54 RT
2352	521,843.06	1,601,225.33	175.83	B 20+04.75, 3.74 RT
2353	521,971.91	1,601,202.00	186.45	B 21+35.31, 13.35 RT
2354	522,074.12	1,601,188.30	201.49	B 22+37.54, 15.81 RT
2355	522,130.49	1,601,152.61	205.26	-

LINE A CENTERLINE

STATION	PC/PT/AP	BRG DELTA	RADIUS	DIST LENGTH	NORTHING	EASTING
10+00.00	BP / PC				522,161.17	1,600,922.81
		1°56'50.21"	5865.00	199.33		
11+99.33	PRC				522,029.87	1,601,072.72
		26°32'54.42"	291.50	35.07		
13+34.40	EP / PT				521,965.16	1,601,189.95

LINE B CENTERLINE

STATION	PC/PT/AP	BRG DELTA	RADIUS	DIST LENGTH	NORTHING	EASTING
18+72.60	BP				521,712.13	1,601,244.72
		N6°37'09.09"W		9.55		
18+82.15	PC				521,721.62	1,601,243.62
		7°52'04.41"	952.00	130.73		
20+12.88	PT				521,850.03	1,601,219.70
		N14°29'13.49"W		132.31		
21+45.19	PC				521,978.14	1,601,186.60
		14°49'24.78"	125.00	32.34		
21+77.53	PRC				522,010.14	1,601,182.63
		27°36'31.59"	184.25	88.78		
22+66.32	EP / PT				522,095.65	1,601,162.15



GENERAL NOTES

1. DATUM PROVIDED HARMSEN, LLC AND CITY OF BELLEVUE.
2. CONTRACTOR TO PROTECT EXISTING MONUMENTS. SEE SPECIAL PROVISIONS.

LOCHNER

NO.	DATE	BY	APPR.	REVISIONS

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C. NEAL 10/21 DRAWN BY DATE
J. TUTTLE 10/21 CHECKED BY DATE

City of Bellevue
Transportation Department

CHRISTOPHER DAVIS STATE OF WASH. PRELIMINARY 53225 REGISTERED PROFESSIONAL ENGINEER

98TH AVE SE AND SE 11TH ST SLOPE STABILIZATION PROJECT

CONSTRUCTION ALIGNMENT PLAN

AL01 SHT 5 OF X

SITE PREPARATION AND EROSION CONTROL NOTES

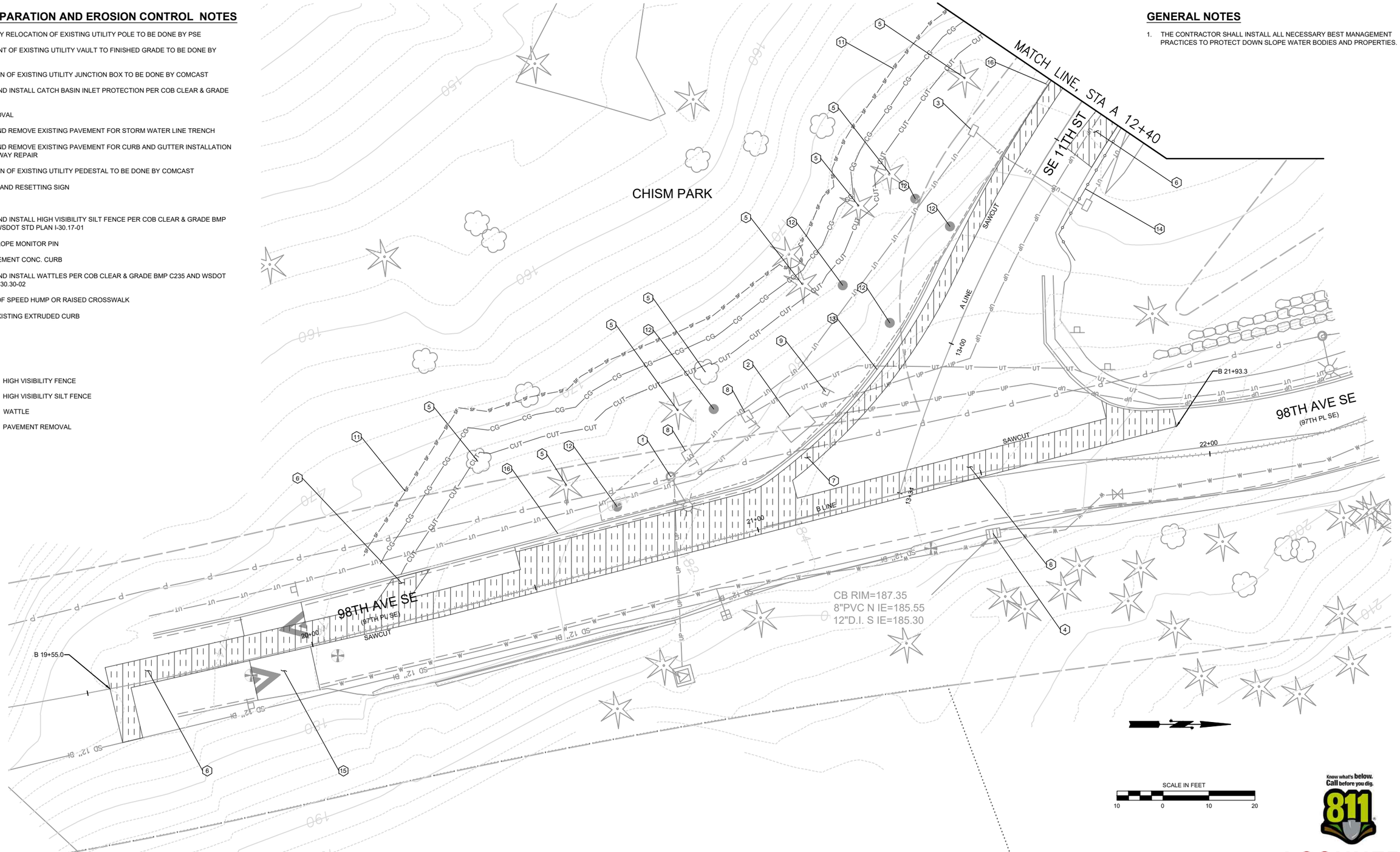
1. TEMPORARY RELOCATION OF EXISTING UTILITY POLE TO BE DONE BY PSE
2. ADJUSTMENT OF EXISTING UTILITY VAULT TO FINISHED GRADE TO BE DONE BY (OTHERS)
3. RELOCATION OF EXISTING UTILITY JUNCTION BOX TO BE DONE BY COMCAST
4. PROVIDE AND INSTALL CATCH BASIN INLET PROTECTION PER COB CLEAR & GRADE BMP 220
5. TREE REMOVAL
6. SAWCUT AND REMOVE EXISTING PAVEMENT FOR STORM WATER LINE TRENCH
7. SAWCUT AND REMOVE EXISTING PAVEMENT FOR CURB AND GUTTER INSTALLATION AND ROADWAY REPAIR
8. RELOCATION OF EXISTING UTILITY PEDESTAL TO BE DONE BY COMCAST
9. REMOVING AND RESETTING SIGN
10. NOT USED
11. PROVIDE AND INSTALL HIGH VISIBILITY SILT FENCE PER COB CLEAR & GRADE BMP C233 AND WSDOT STD PLAN I-30.17-01
12. REMOVE SLOPE MONITOR PIN
13. REMOVE CEMENT CONC. CURB
14. PROVIDE AND INSTALL WATTLES PER COB CLEAR & GRADE BMP C235 AND WSDOT STD PLAN I-30.30-02
15. REMOVAL OF SPEED HUMP OR RAISED CROSSWALK
16. REMOVE EXISTING EXTRUDED CURB

LEGEND

- HVF — HIGH VISIBILITY FENCE
- SF SF — HIGH VISIBILITY SILT FENCE
- WATTLE
- PAVEMENT REMOVAL

GENERAL NOTES

1. THE CONTRACTOR SHALL INSTALL ALL NECESSARY BEST MANAGEMENT PRACTICES TO PROTECT DOWN SLOPE WATER BODIES AND PROPERTIES.



Know what's below. Call before you dig. 811

LOCHNER

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City of Bellevue
Transportation Department

CHRISTOPHER DAVIS STATE OF WASH 53225 REGISTERED PROFESSIONAL ENGINEER PRELIMINARY 7/9

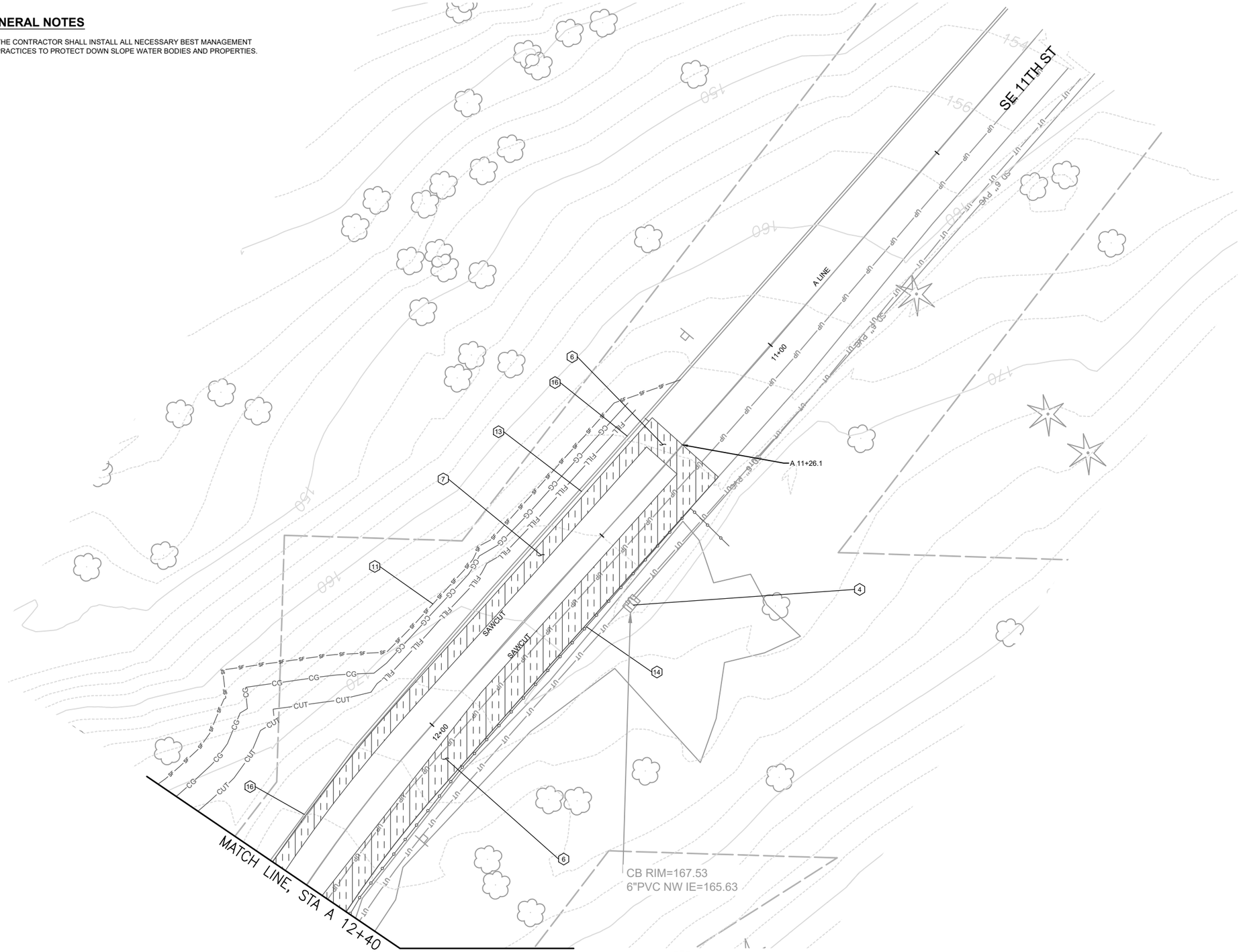
98TH AVE SE AND SE 11TH ST SLOPE STABILIZATION PROJECT

SITE PREPARATION AND ESC PLANS

SP01 SHT 6 OF X

GENERAL NOTES

1. THE CONTRACTOR SHALL INSTALL ALL NECESSARY BEST MANAGEMENT PRACTICES TO PROTECT DOWN SLOPE WATER BODIES AND PROPERTIES.



SITE PREPARATION AND EROSION CONTROL NOTES

1. TEMPORARY RELOCATION OF EXISTING UTILITY POLE TO BE DONE BY PSE
2. ADJUSTMENT OF EXISTING UTILITY VAULT TO FINISHED GRADE TO BE DONE BY (OTHERS)
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9. REMOVING AND RESETTING SIGN
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15. REMOVAL OF SPEED HUMP OR RAISED CROSSWALK
16. REMOVE EXISTING EXTRUDED CURB

LEGEND

- HVF — HIGH VISIBILITY FENCE
- SF — SF — HIGH VISIBILITY SILT FENCE
- WATTLE
- PAVEMENT REMOVAL

SCALE IN FEET
10 0 10 20

Know what's below. Call before you dig. 811

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CHRISTOPHER DAVIS STATE OF WASHINGTON 53225 REGISTERED PROFESSIONAL ENGINEER PRELIMINARY

98TH AVE SE AND SE 11TH ST SLOPE STABILIZATION PROJECT

SITE PREPARATION AND ESC PLANS

SP02 SHT 7 OF X

DRAINAGE NOTES

1 PROVIDE AND INSTALL 12" PVC STORM SEWER PIPE PER COB STD DWG NO D-25 & D-46. SEE PROFILE, SHEET UT03 FOR PIPE SLOPES.

3 PROVIDE AND INSTALL CATCH BASIN TYPE 2 PER COB STD DWG NO D-4 WITH SOLID LID PER COB STD DWG NO D-8. ADJUST TO FINISHED GRADE PER COB STD DWG NO D-23.
- 3a: STA 20+15.82, 1.97' L

4 PROVIDE AND INSTALL CATCH BASIN TYPE 2 PER COB STD DWG NO D-4 WITH VANED GRATE PER COB STD DWG NO D-6. ADJUST TO FINISHED GRADE PER COB STD DWG NO D-23.
- 4b: STA 21+89.31, 8.73' L

5 PROVIDE AND INSTALL 6" PERFORATED CURTAIN DRAIN PER DETAIL ON SHEET UT04

6 PROVIDE AND INSTALL 6" PERFORATED UNDERDRAIN PIPE PER RETAINING WALL DETAIL ON SHEET S02

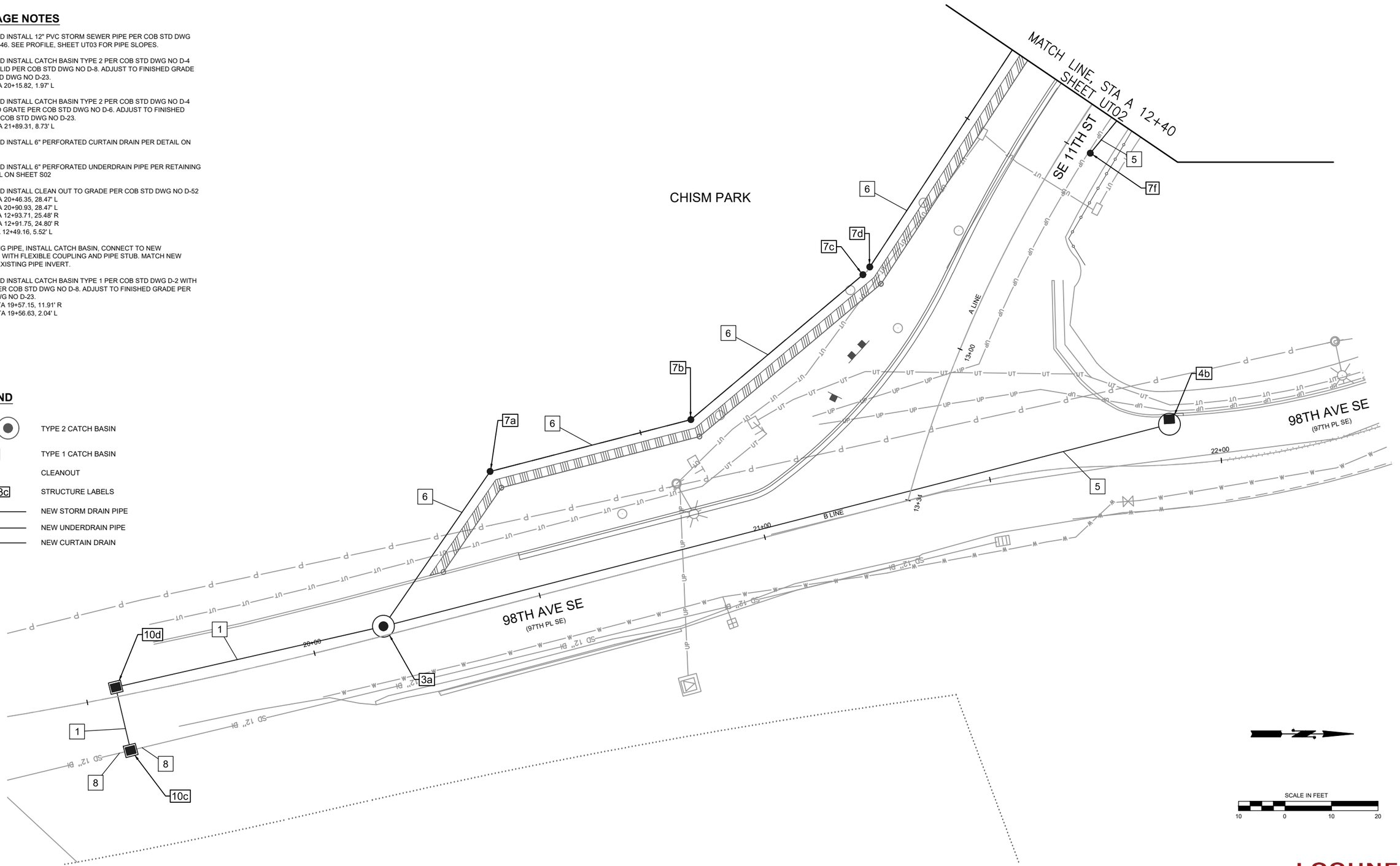
7 PROVIDE AND INSTALL CLEAN OUT TO GRADE PER COB STD DWG NO D-52
- 7a: STA 20+46.35, 28.47' L
- 7b: STA 20+90.93, 28.47' L
- 7c: STA 12+93.71, 25.48' R
- 7d: STA 12+91.75, 24.80' R
- 7f: STA 12+49.16, 5.52' L

8 CUT EXISTING PIPE, INSTALL CATCH BASIN, CONNECT TO NEW STRUCTURE WITH FLEXIBLE COUPLING AND PIPE STUB. MATCH NEW INVERT TO EXISTING PIPE INVERT.

10 PROVIDE AND INSTALL CATCH BASIN TYPE 1 PER COB STD DWG D-2 WITH SOLID LID PER COB STD DWG NO D-8. ADJUST TO FINISHED GRADE PER COB STD DWG NO D-23.
- 10c: STA 19+57.15, 11.91' R
- 10d: STA 19+56.63, 2.04' L

LEGEND

- TYPE 2 CATCH BASIN
- TYPE 1 CATCH BASIN
- CLEANOUT
- 3c STRUCTURE LABELS
- NEW STORM DRAIN PIPE
- NEW UNDERDRAIN PIPE
- NEW CURTAIN DRAIN



SCALE IN FEET
10 0 10 20

LOCHNER

NO.	DATE	BY	APPR.	REVISIONS

J. PHILLIPS — DESIGNED BY — 10/21 DATE
C. NEAL — DRAWN BY — 10/21 DATE
M. RANDALL — CHECKED BY — 10/21 DATE

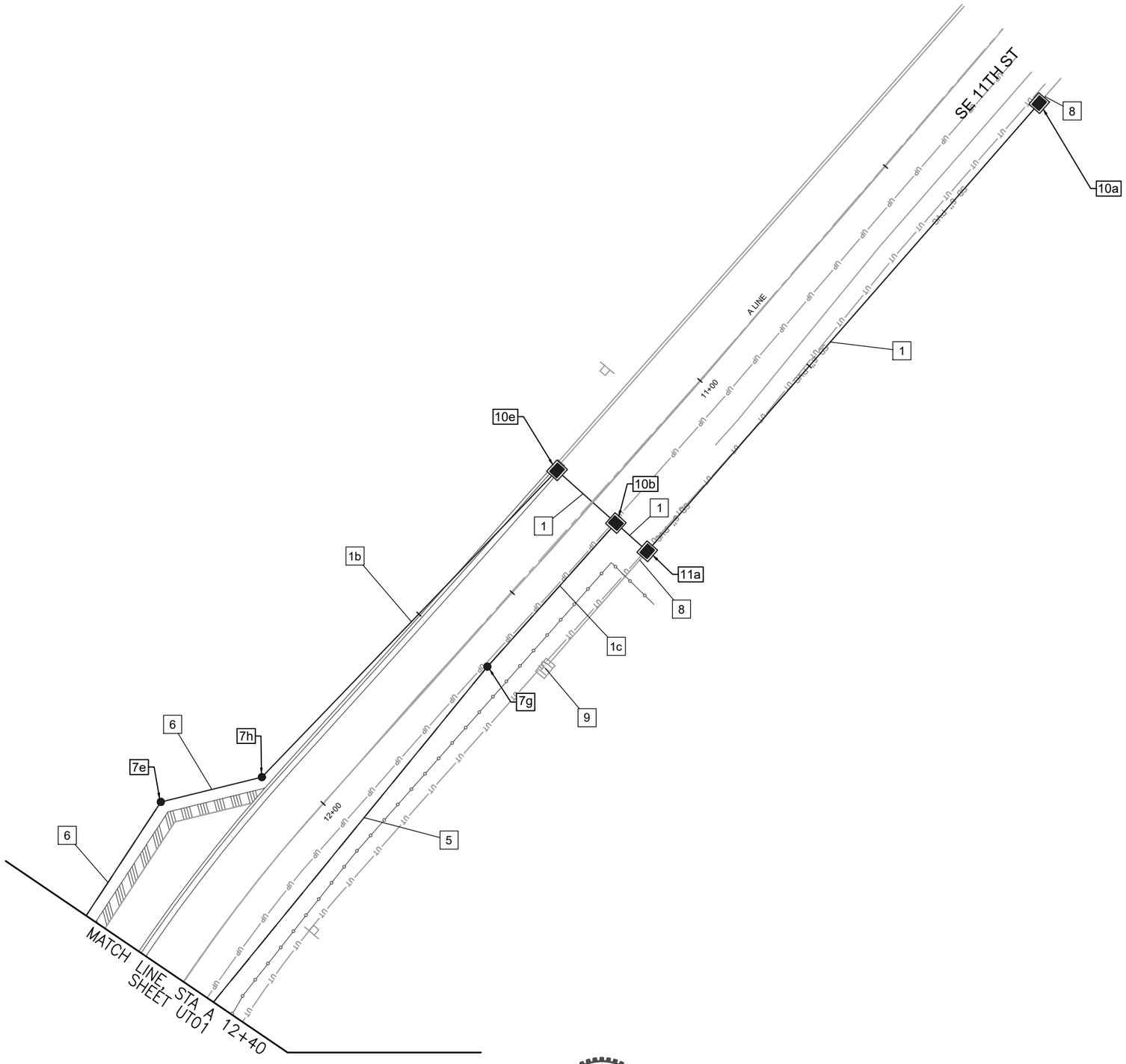
City of Bellevue
Transportation Department

JOSHUA PAUL PH — STATE OF WASHINGTON — 40880 — REGISTERED PROFESSIONAL ENGINEER — PRELIMINARY NOT FOR CONSTRUCTION

98TH AVE SE AND SE 11TH ST SLOPE STABILIZATION PROJECT

UTILITY PLANS

UT01 — SHT 8 OF X



DRAINAGE NOTES

1 PROVIDE AND INSTALL 12" PVC STORM SEWER PIPE PER COB STD DWG NO D-25 & D-46. SEE PROFILE, SHEET UT03 FOR PIPE SLOPES.

1b PROVIDE AND INSTALL 6" PVC STORM SEWER PIPE PER COB STD DWG NO D-25 & D-46. SEE PROFILE, SHEET UT03 FOR PIPE SLOPES.

1c PROVIDE AND INSTALL 8" PVC STORM SEWER PIPE PER COB STD DWG NO D-25 & D-46. SEE PROFILE, SHEET UT03 FOR PIPE SLOPES.

5 PROVIDE AND INSTALL 8" PERFORATED CURTAIN DRAIN PER DETAIL ON SHEET UT04

6 PROVIDE AND INSTALL 6" PERFORATED UNDERDRAIN PIPE PER RETAINING WALL DETAIL ON SHEET S02

7 PROVIDE AND INSTALL CLEAN OUT TO GRADE PER COB STD DWG NO D-52
- 7e: STA 12+17.67, 22.01' R
- 7g: STA 11+62.65, 5.40' L
- 7h: STA 12+03.64, 11.14' R

8 CUT EXISTING PIPE, INSTALL CATCH BASIN, CONNECT TO NEW STRUCTURE WITH FLEXIBLE COUPLING AND PIPE STUB. MATCH NEW INVERT TO EXISTING PIPE INVERT.

9 REPLACE VANED GRATE ON EXISTING STRUCTURE

10 PROVIDE AND INSTALL CATCH BASIN TYPE 1 PER COB STD DWG D-2 WITH SOLID LID PER COB STD DWG NO D-8. ADJUST TO FINISHED GRADE PER COB STD DWG NO D-23.
- 10a: STA 10+23.89, 13.32' L
- 10b: STA 11+28.69, 5.51' L
- 10c: STA 19+57.15, 11.91' R
- 10d: STA 19+56.63, 2.04' L
- 10e: STA 11+28.60, 8.43' R

11 PROVIDE AND INSTALL CATCH BASIN TYPE 1L PER COB STD DWG D-3 WITH SOLID LID PER COB STD DWG NO D-8. ADJUST TO FINISHED GRADE PER COB STD DWG NO D-23.
- 11a: STA 11+28.74, 12.95' L

LEGEND

- TYPE 2 CATCH BASIN
- TYPE 1 CATCH BASIN
- CLEANOUT
- 3c STRUCTURE LABELS
- NEW STORM DRAIN PIPE
- NEW UNDERDRAIN PIPE
- NEW CURTAIN DRAIN

SCALE IN FEET
10 0 10 20

LOCHNER

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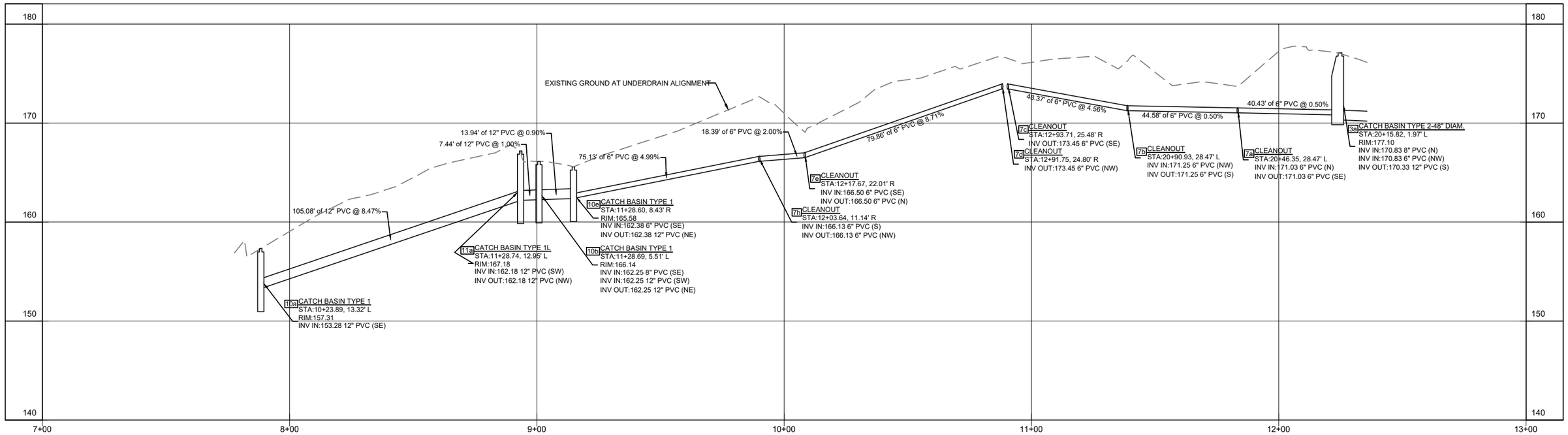
City of Bellevue
Transportation Department

JOSHUA PAUL PHILLIPS STATE OF WASHINGTON 40880 REGISTERED PROFESSIONAL ENGINEER
PRELIMINARY NOT FOR CONSTRUCTION

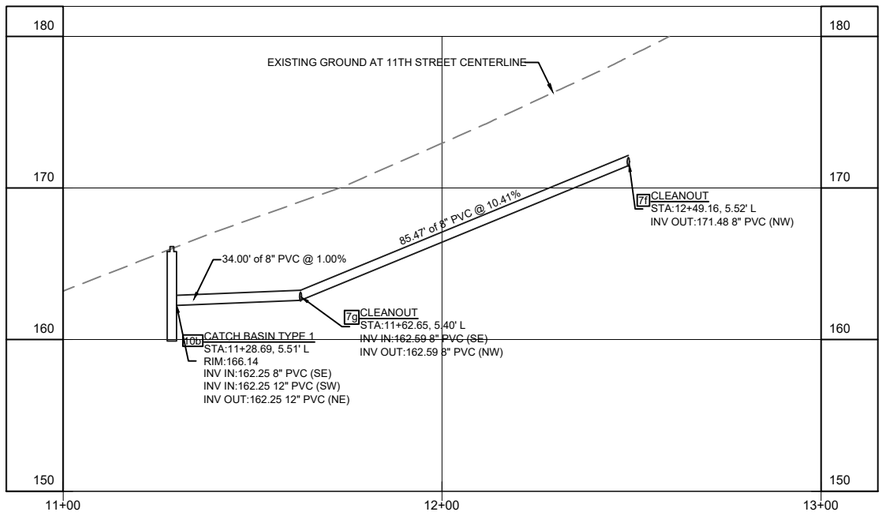
98TH AVE SE AND SE 11TH ST SLOPE STABILIZATION PROJECT

UTILITY PLANS

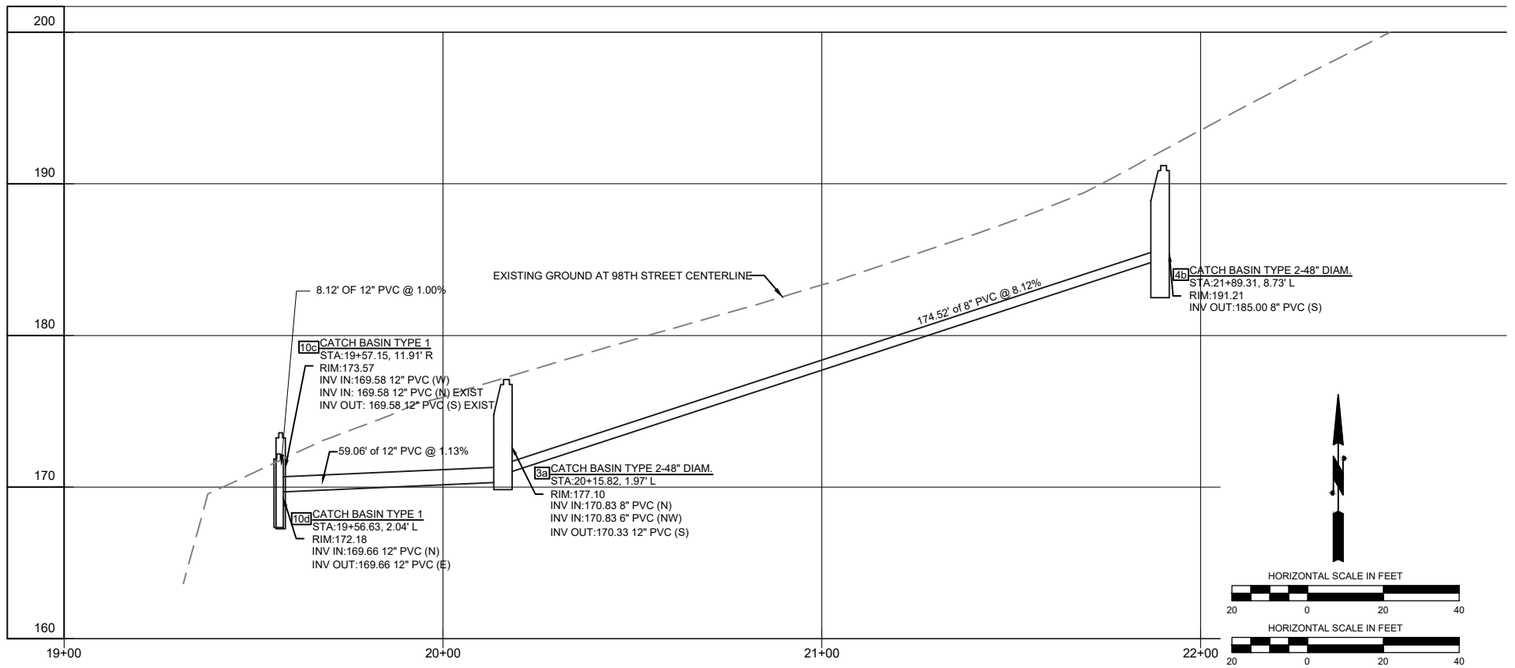
UT02 SHT 9 OF X



RETAINING WALL UNDERDRAIN PROFILE
(PROFILE SHOWN AT UNDERDRAIN ALIGNMENT)



11TH STREET CURTAIN DRAIN PROFILE



98TH STREET STORMDRAIN PROFILE

LOCHNER

NO.	DATE	BY	APPR.	REVISIONS

J. PHILLIPS 10/21
DESIGNED BY DATE
C. NEAL 10/21
DRAWN BY DATE
M. RANDALL 10/21
CHECKED BY DATE

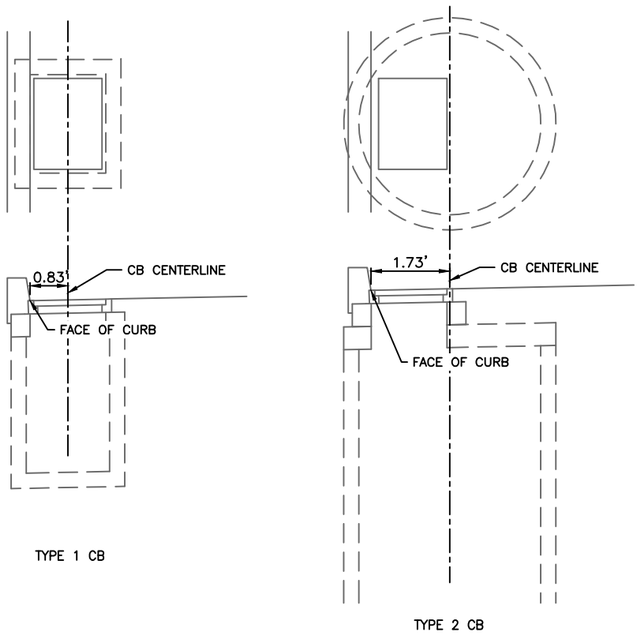
City of Bellevue
Transportation Department

JOSHUA PAUL PHI
STATE OF WASHINGTON
PRELIMINARY
40880
REGISTERED PROFESSIONAL ENGINEER

98TH AVE SE AND SE 11TH ST SLOPE STABILIZATION PROJECT

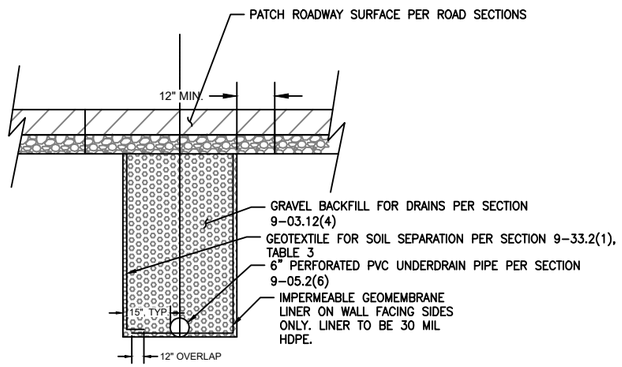
UTILITY PROFILE

UT03 SHT 10 OF X



CATCH BASIN OFFSET DETAIL

NO SCALE



CURTAIN DRAIN DETAIL

NO SCALE

LOCHNER

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C. NEAL — DRAWN BY — 10/21 DATE
M. RANDALL — CHECKED BY — DATE

City of Bellevue
Transportation Department

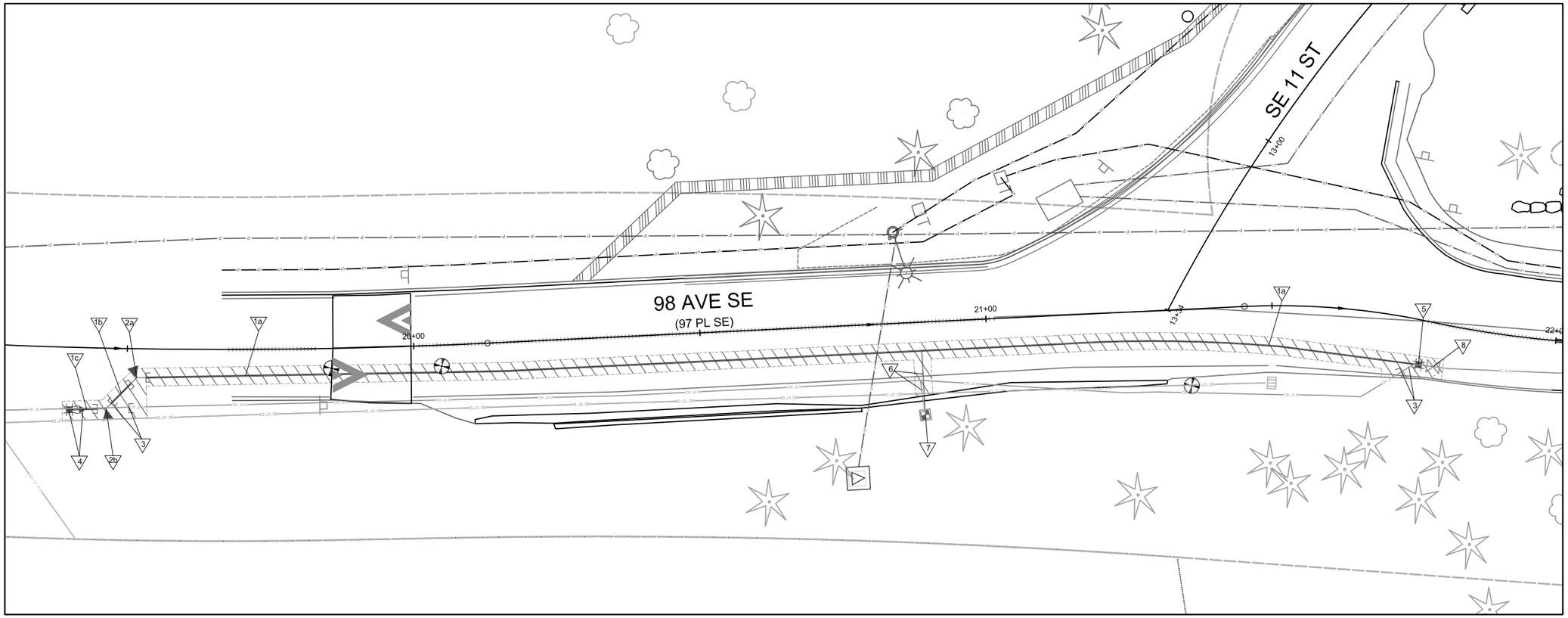
JOSHUA PAUL PHI
STATE OF WASH.
PRELIMINARY
40880
REGISTERED
PROFESSIONAL ENGINEER
US

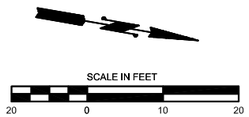
98TH AVE SE AND SE 11TH ST SLOPE STABILIZATION PROJECT

UTILITY DETAILS

UT04

SHT 11 OF X





WATER CONSTRUCTION NOTES

1. PROVIDE AND INSTALL NEW 8" DUCTILE IRON WATER MAIN PER BELLEVUE STD DWG NO W-6 AT DEPTH OF APPROX. 48" TO THE INVERT. EXACT DEPTH TO MATCH AT TIE IN POINTS.
   a. 161 LF
   b. 8 LF
   c. 7 LF
2. PROVIDE AND INSTALL 8" 45 DEGREE BEND (MECHANICAL JOINT), CONCRETE BLOCK PER COB STD. DWG. NOS. W-1 AND W-2.
   a. STA. 19+51.69, 5.1' RT
   b. STA. 19+46.48, 10.6' RT
3. REMOVE 6" AC MAIN PIPE AS NEEDED. ABANDON EXISTING 6" AC WATER MAIN IN PLACE WITH ONE 6" END CAP COUPLING.
4. CONNECT NEW 8" DI WATER MAIN TO EXISTING 6" AC MAIN WITH A NEW 8"X6" REDUCER (MJ) AND 6" TRANSITION COUPLING AND ONE 6" DI SPOOL (LTF).
5. CONNECT NEW 8" DI WATER MAIN TO EXISTING 8" DI WATER MAIN WITH TRANSITION COUPLING.
6. PROVIDE AND INSTALL NEW COPPER TYPE K WATER SERVICE LINE TO MATCH THE EXISTING SERVICE DIAM. (1 IN MIN.) FROM THE NEW 8" DUCTILE IRON MAIN TO THE METER PER COB STD. DWG. NOS. W-23, W-24, W-25 AND W-26. CRIMP OR CAP EXISTING SERVICE LINE AND ABANDON IN PLACE.
7. REMOVE AND DISPOSE OF EXISTING WATER METER SETTER AND WATER METER BOX. RETAIN WATER METER FOR REUSE. PROVIDE AND INSTALL NEW WATER METER SETTER AND WATER METER BOX PER COB STD. DWG. W-24 WITHIN THE CITY OF BELLEVUE RIGHT-OF-WAY. REINSTALL RETAINED OR NEW WATER METER ON NEW METER SETTER. ADJUST WATER METER BOX TO FINISHED GRADE.
8. ADJUST WATER VALVE BOX TO EXISTING GRADE PER COB STD. DWG. NO. W-11.

GENERAL NOTES

1. CALL UTILITIES UNDERGROUND LOCATION CENTER AT 1-800-424-5555 48 HOURS PRIOR TO CONSTRUCTION.
2. ALL ASPHALT AND CONCRETE TO BE REMOVED SHALL BE SAWCUT.
3. NO GRADE ELEVATIONS WILL BE PROVIDED. ELEVATIONS TO MATCH EXISTING CONDITIONS OR FIELD FIT AS DIRECTED BY THE ENGINEER.

GENERAL WATER NOTES

1. ALL WORK SHALL CONFORM TO THE CURRENT VERSION OF THE CITY OF BELLEVUE UTILITY STANDARDS.
2. ALL PIPE SHALL BE DUCTILE IRON CLASS 52 UNLESS OTHERWISE SHOWN.
3. NEW WATER MAINS SHALL BE TESTED, FLUSHED AND DISINFECTED BEFORE CONNECTING THE NEW WATER MAIN TO THE EXISTING WATER MAIN. WATER MAINS SHALL BE DISINFECTED PER THE CURRENT VERSION OF AWWA C651-14 AND THE CITY OF BELLEVUE UTILITY ENGINEERING STANDARDS.
4. ENGINEER SHALL BE PRESENT WHEN WATER SERVICES ARE EXPOSED.
5. BLOCKING FOR NEW WATER MAIN SHALL BE NO LESS THAN 5 FEET FROM THE OLD 6" AC WATER MAIN TRENCH.

WATER SYMBOLS

EXISTING	PROPOSED	
		90 DEGREE BEND, M.J.
		45 DEGREE BEND, M.J.
		22.5 DEGREE BEND, M.J.
		11.25 DEGREE BEND, M.J.
		REDUCER, FL.
		REDUCER, M.J.
		REDUCER, M.J. x FL.
		REDUCER, M.J. x P.E.
		REDUCER, P.E. x M.J./FL. x M.J.
		TAPPING TEE & VALVE, FL. x M.J.
		CAP/PLUG
		COUPLING
		WATER METER
		GATE VALVE

LEGEND

- NEW WALL
- 10" HMA PATCH

NO.	DATE	BY	APPR.	REVISIONS

C. Masek 10/21
DESIGNED BY DATE
C. Masek 10/21
DRAWN BY DATE
C. Masek 10/21
CHECKED BY DATE

City of Bellevue
Transportation Department

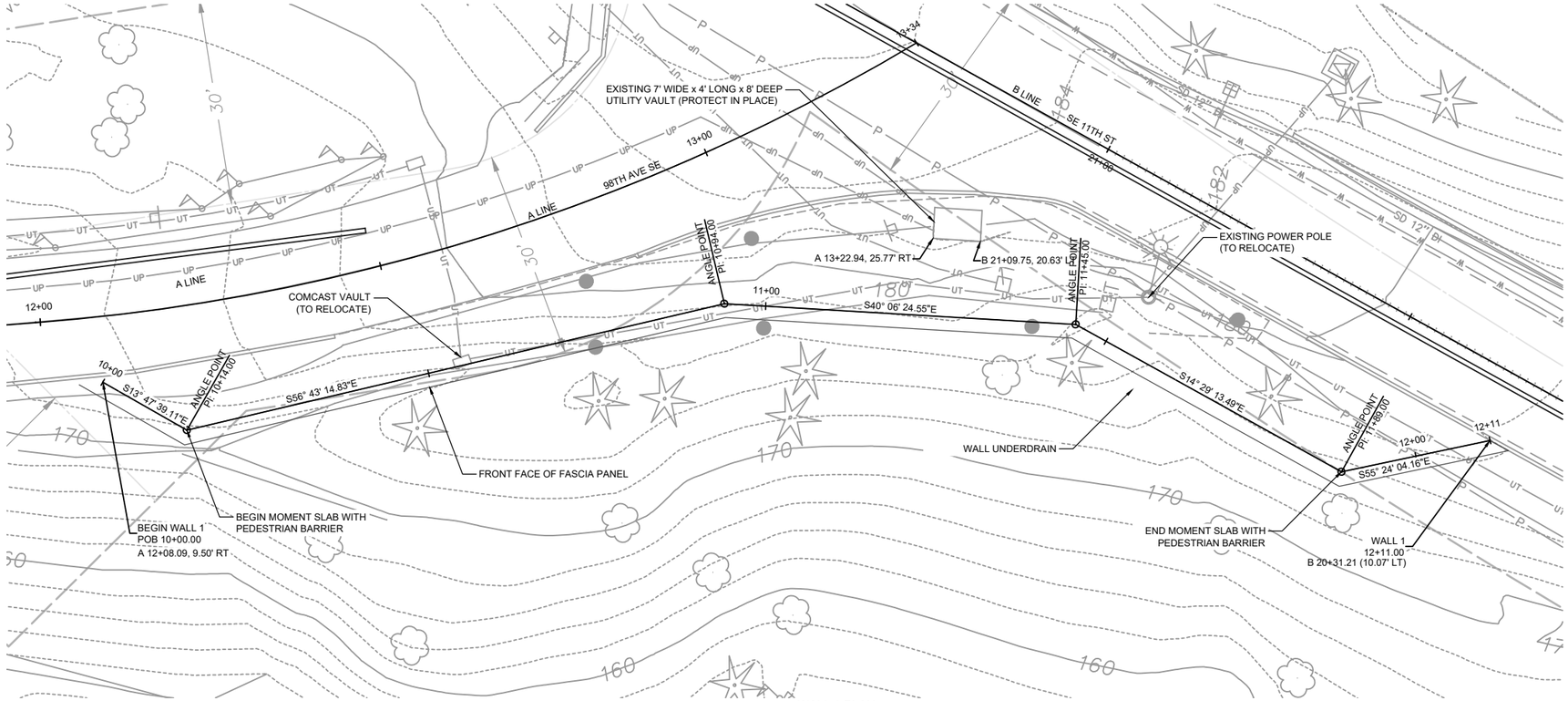
CHRISTOPHER D. MASEK STATE OF WASHINGTON 45856 REGISTERED PROFESSIONAL ENGINEER

98TH AVE SE AND SE 11TH ST SLOPE STABILIZATION PROJECT

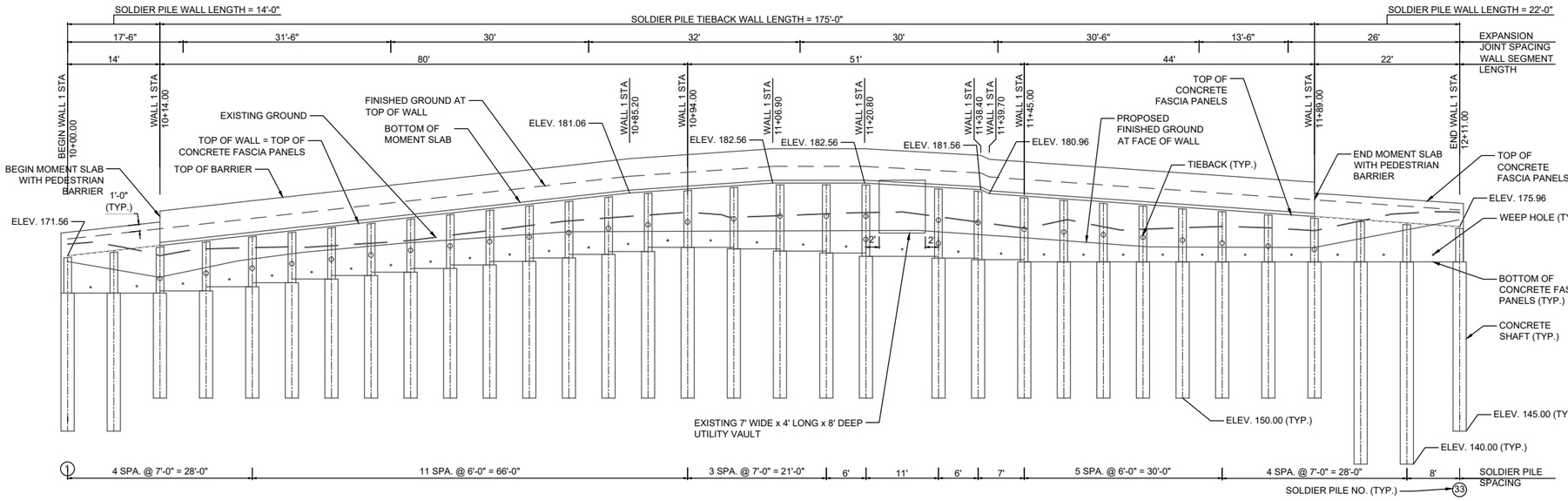
WATER MAIN REPLACEMENT PLAN

UT05

SHT 12 OF XX



WALL 1 PLAN



WALL 1 DEVELOPED ELEVATION

GENERAL NOTES:

1. ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION, DATED 2021, AND SPECIAL PROVISIONS.

2. THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE FOLLOWING :

   A. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS (AASHTO LRFD), CUSTOMARY U.S. UNITS, EIGHTH EDITION, WITH INTERIM REVISIONS THROUGH 2020.
   B. WSDOT BRIDGE DESIGN MANUAL (M23-50.19) (BDM) WITH UPDATES AND APPLICABLE DESIGN MEMOS THROUGH SEPTEMBER 2020.
   C. FINAL DESIGN GEOTECHNICAL ENGINEERING AND ENVIRONMENTAL REPORT, HENRY ROAD OVERPASS & ROAD EXTENSION, LIBERTY LAKE, WASHINGTON BY GEOENGINEERS DATED JUNE 17, 2020.
   D. SEISMIC DESIGN BASED UPON WSDOT "SPECTRA" PROGRAM OUTPUT SPECIFYING THE PROJECT COORDINATES WITH A PEAK GROUND ACCELERATION OF 0.495G.

3. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF ALL EXISTING UTILITIES WITHIN THE VICINITY OF THE WALL PRIOR TO BEGINNING CONSTRUCTION.

4. MATERIALS :

   CAST-IN-PLACE CONCRETE FOR MOMENT SLAB, PEDESTRIAN BARRIER, AND FASCIA PANELS SHALL BE CLASS 4000.

   CAST-IN-PLACE CONCRETE FOR PILE SHAFTS SHALL BE CLASS 4000P.

   TIMBER LAGGING SHALL BE PRESSURE TREATED DOUGLAS FIR-LARCH NO. 2 OR BETTER

   ALL OTHER CAST-IN-PLACE CONCRETE SHALL BE CLASS 4000.

   ALL SOLDIER PILES SHALL BE STEEL. W-SECTION PILES SHALL CONFORM TO ASTM A992 AND ALL HP-SECTION PILES SHALL CONFORM TO ASTM A572. SOLDIER PILES SHALL BE PAINTED TO THE LIMITS SHOWN ON THE PLANS IN ACCORDANCE WITH STANDARD SPECIFICATION SECTION 6-16.3(4).

   ALL OTHER STRUCTURAL STEEL SHALL CONFORM TO ASTM A992 OR ASTM A36.

   EXPANDED POLYSTYRENE SHALL CONFORM WITH WSDOT STD. SPEC. 904.6

   REINFORCING BARS SHALL CONFORM TO ASTM A706 GRADE 60, UNLESS OTHERWISE NOTED.

   UNIT WEIGHTS:

PLAIN CONCRETE	145 PCF
REINFORCED CONCRETE	150 PCF
REINFORCING STEEL	490 PCF
GRAVEL BACKFILL FOR WALLS	130 PCF

5. UNLESS OTHERWISE SHOWN ON THE PLANS, THE CONCRETE COVER MEASURED FROM THE FACE OF CONCRETE TO THE FACE OF ANY REINFORCING STEEL SHALL BE

   - 3" AT SURFACES DEPOSITED AGAINST EARTH.
   - 2" AT ALL OTHER LOCATIONS.

6. ALL DIMENSIONS ARE HORIZONTAL AND VERTICAL UNLESS OTHERWISE NOTED.

7. EXISTING GROUND LINE IS APPROXIMATE AND MAY CHANGE PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL VERIFY THE GROUND LINE PRIOR TO CONSTRUCTION.

8. THE SEQUENCE OF CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL TEMPORARY GUYS, BRACING, SHORING, AND/OR OTHER SUPPORTS AS NEEDED TO SAFELY RESIST ALL LOADS DURING CONSTRUCTION.

9. ALL WELDING SHALL BE DONE TO MINIMIZE DISTORTION. THE WELDING SEQUENCES AND PROCEDURES TO BE USED SHALL BE SUBMITTED TO THE ENGINEER

10. UNLESS OTHERWISE NOTED, MINIMUM LAP SPLICES SHALL BE CLASS B WITH MINIMUM LENGTHS AS FOLLOWS:

	OTHER	TOP *		OTHER	TOP *
#4 BAR -	2'-0"	2'-1"	#4 (E) BAR =	2'-5"	2'-8"
#5 BAR -	2'-0"	2'-7"	#5 (E) BAR =	3'-0"	3'-4"
#6 BAR -	2'-5"	3'-1"	#6 (E) BAR =	3'-7"	4'-0"

(E) DENOTES EPOXY COATED BARS

* TOP BARS ARE HORIZONTAL BARS PLACED SO THAT MORE THAN 12" OF FRESH CONCRETE IS CAST BELOW THEM.

SCALE IN FEET
10 0 10 20

LOCHNER

NO.	DATE	BY	APPR.	REVISIONS

S. JOHNSON 07/21 DESIGNED BY DATE
T. JOHNSON 07/21 DRAWN BY DATE
B. NAKASHOJI 07/21 CHECKED BY DATE

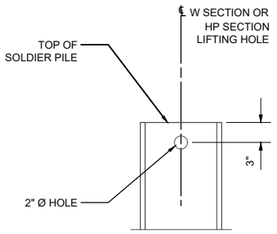
City of Bellevue
Transportation Department

TIMOTHY PAUL JOHNSON STATE OF WASHINGTON 20113369 REGISTERED PROFESSIONAL ENGINEER PRELIMINARY

98TH AVE SE AND SE 11TH ST SLOPE STABILIZATION PROJECT

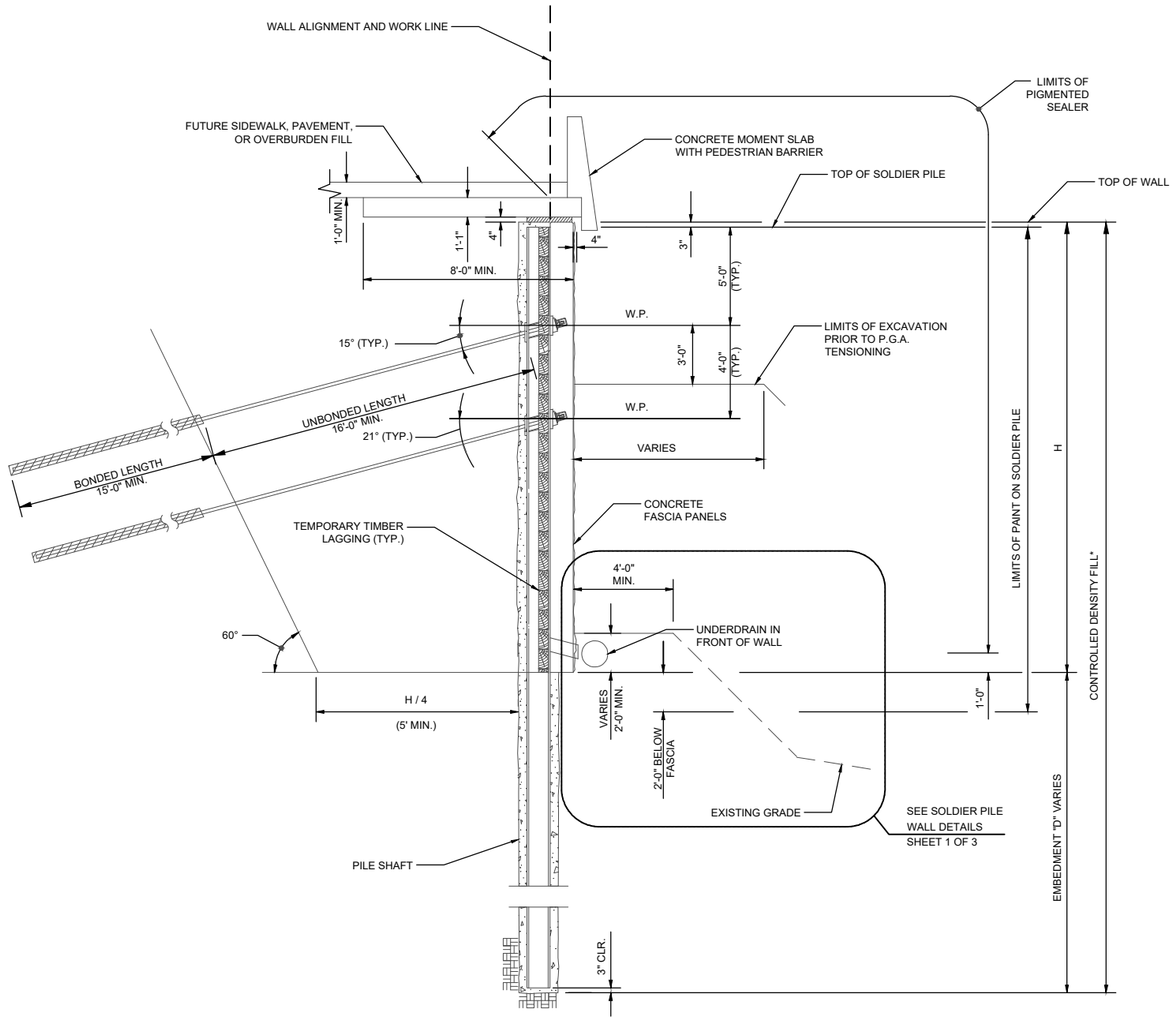
WALL 1 PLAN AND ELEVATION

S01 SHT 13 OF X



SOLDIER PILE LIFTING HOLE

LIFT HOLE TO BE DRILLED IN THE SHOP PRIOR TO PAINTING OF PILE



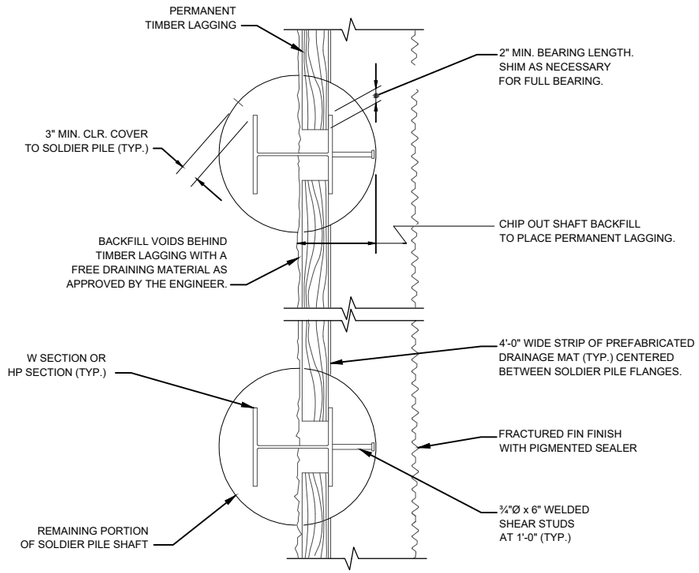
*USE CONTROLLED DENSITY FILL WHEN PLACED IN THE DRY. USE PUMPABLE LEAN CONCRETE WHEN PLACED IN THE WET.

TYPICAL SECTION

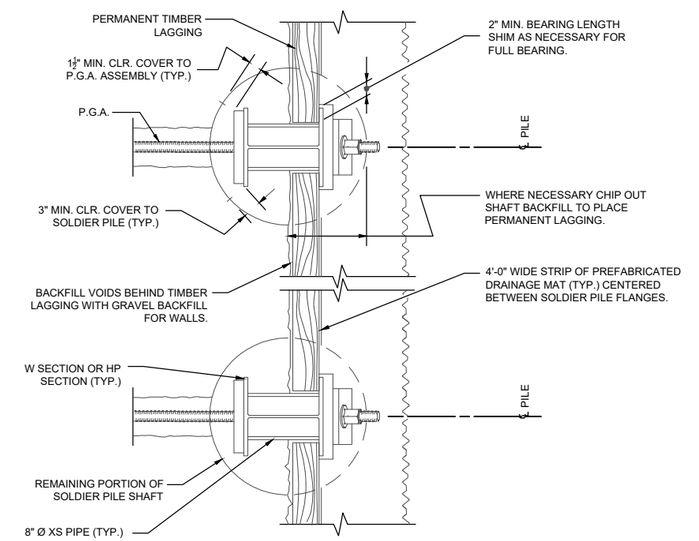
SHOWN FOR SOLDIER PILE WITH P.G.A
SIMILAR FOR SOLDIER PILE WITHOUT P.G.A.

P.G.A. = PERMANENT GROUND ANCHORS

TEMPORARY TIMBER LAGGING SHALL CONFORM TO STANDARD SPECIFICATION SECTION 6-16.3(6)



PLAN
SOLDIER PILE WALL WITHOUT P.G.A.



PLAN
SOLDIER PILE WALL WITH P.G.A.

LOCHNER

NO.	DATE	BY	APPR.	REVISIONS

S. JOHNSON 10/21 DESIGNED BY DATE
T. JOHNSON 10/21 DRAWN BY DATE
B. NAKASHOJI 10/21 CHECKED BY DATE

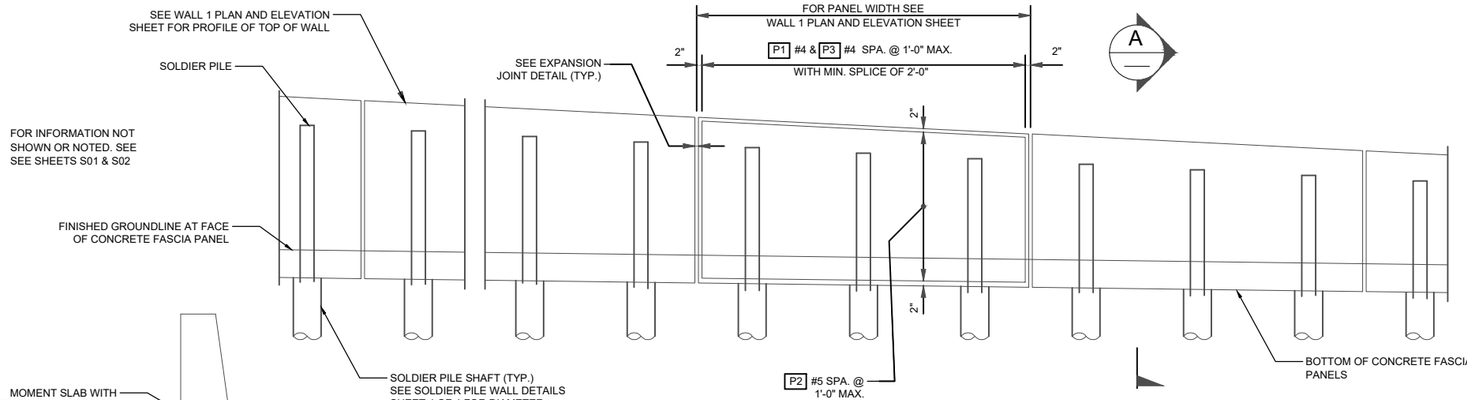
City of Bellevue
Transportation Department

TIMOTHY PAUL — STATE OF WASHINGTON — 21133 — REGISTERED PROFESSIONAL ENGINEER — PRELIMINARY — NOT FOR CONSTRUCTION

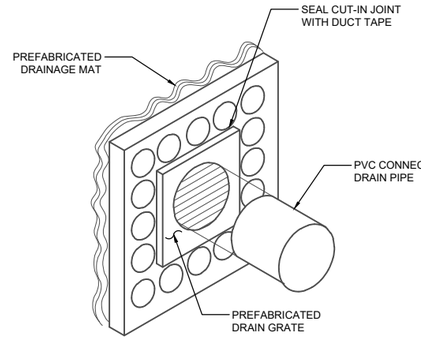
98TH AVE SE AND SE 11TH ST SLOPE STABILIZATION PROJECT

SOLDIER PILE WALL TYPICAL SECTION AND DETAILS

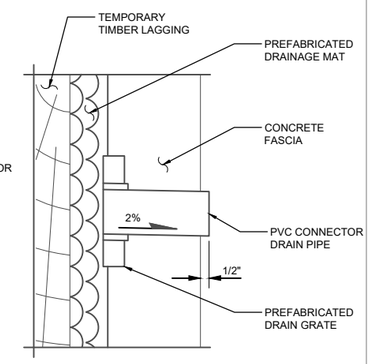
S02 SHT 14 OF X



PARTIAL WALL ELEVATION



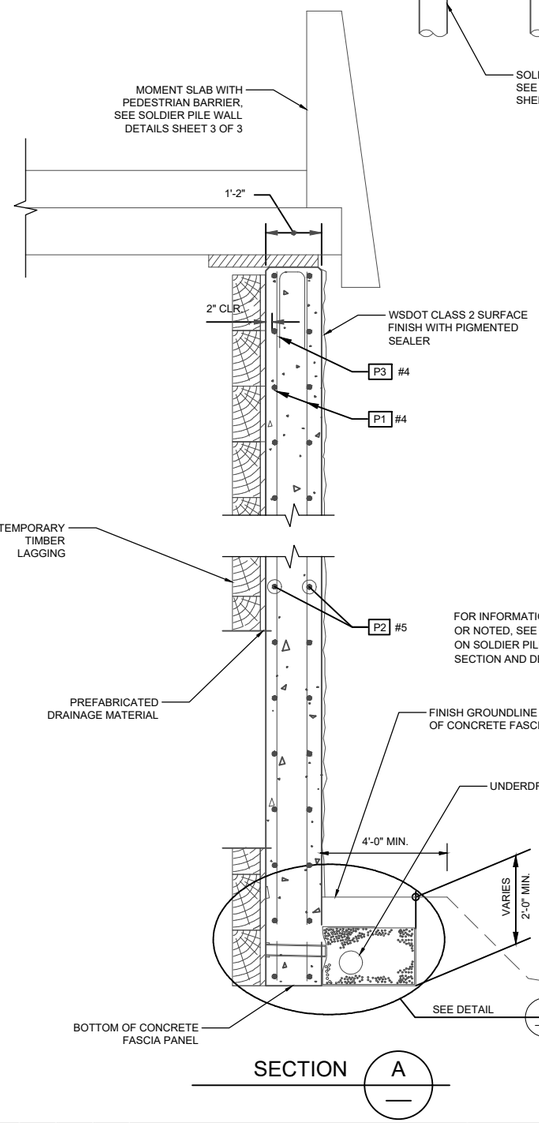
ISOMETRIC VIEW



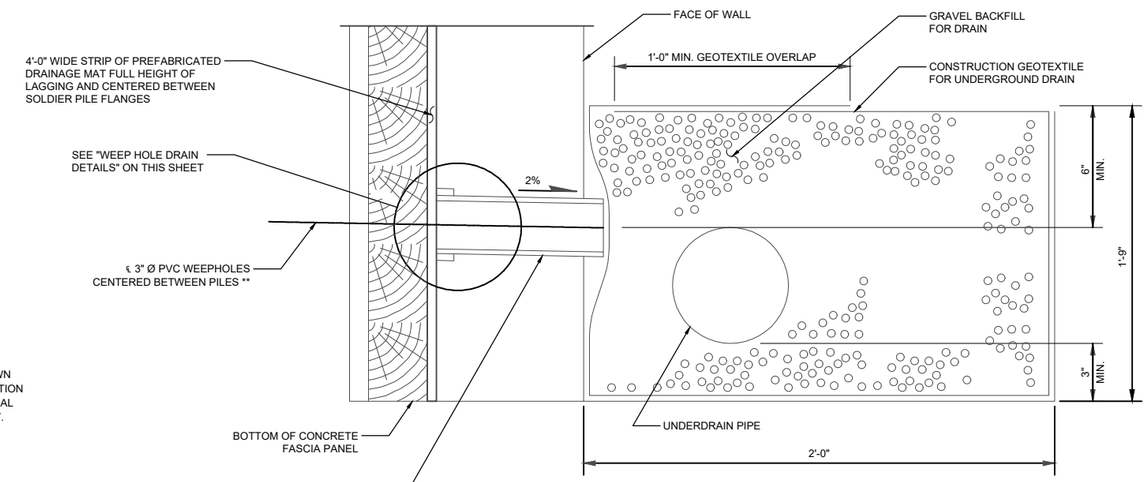
SECTIONAL VIEW

WEEP HOLE DRAIN DETAILS

DRAIN GRATE INSTALLATION SHALL NOT DISRUPT PREFABRICATED DRAINAGE MAT

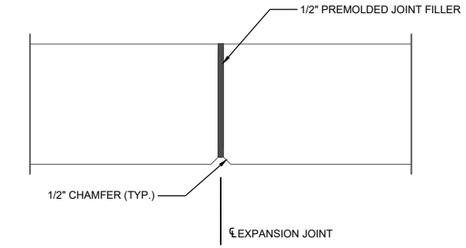


SECTION A



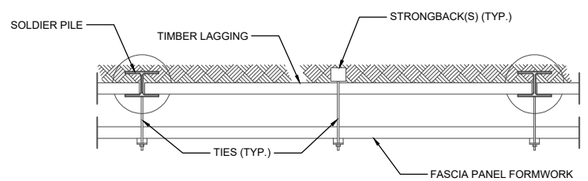
DETAIL 2

** WEEP HOLES LOCATED AT AN EXPANSION JOINT MAY BE ADJUSTED 6" TO 1'-0" AWAY FROM THE EXPANSION JOINT, BUT REMAIN WITHIN THE MIDDLE HALF OF THE PREFABRICATED DRAINAGE MAT.



WALL EXPANSION JOINT DETAIL

NOTE:
EXPANSION JOINTS SHALL BE LOCATED AS SHOWN ON WALL PLAN AND ELEVATION SHEET.



TYPICAL FASCIA PANEL FORMWORK

- SEE WSDOT STANDARD SPECIFICATION SECTION 6-16.3(2) FOR FASCIA PANEL FORMING REQUIREMENTS.
- STRONGBACK(S) AND TIES SPACED AS REQUIRED FOR FORMING.

LOCHNER

NO.	DATE	BY	APPR.	REVISIONS

S. JOHNSON 10/21 DESIGNED BY DATE
T. JOHNSON 10/21 DRAWN BY DATE
B. NAKASHOJI 10/21 CHECKED BY DATE

City of Bellevue
Transportation Department

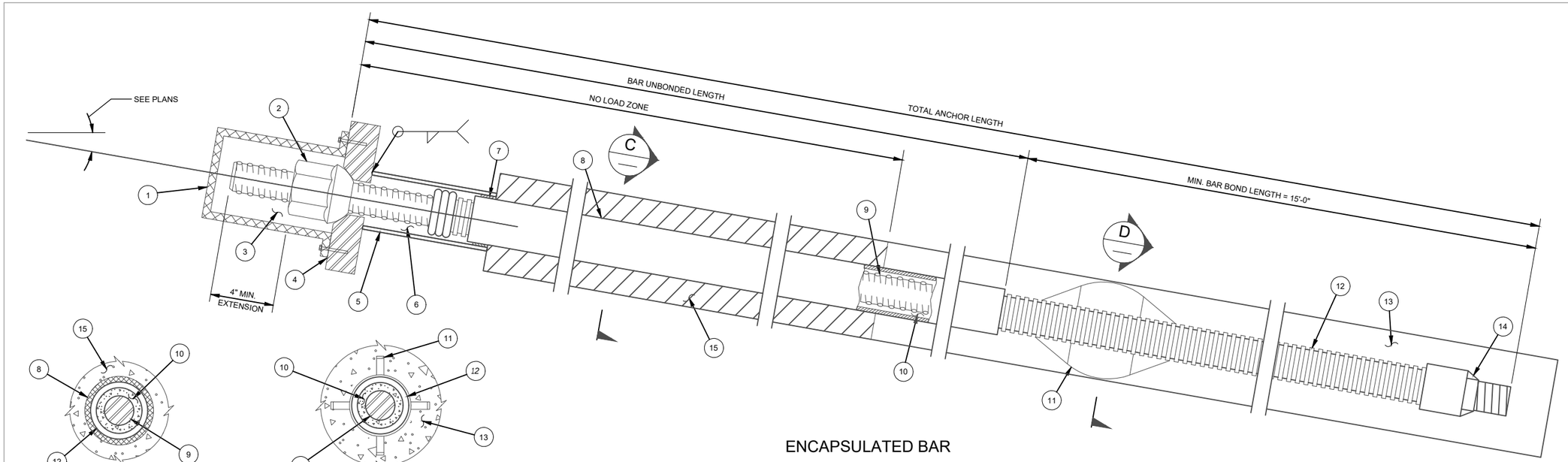
TIMOTHY PAUL JOHNSON STATE OF WASHINGTON 113348 REGISTERED PROFESSIONAL ENGINEER PRELIMINARY

98TH AVE SE AND SE 11TH ST SLOPE STABILIZATION PROJECT

SOLDIER PILE WALL DETAILS
SHEET 1 OF 4

S03

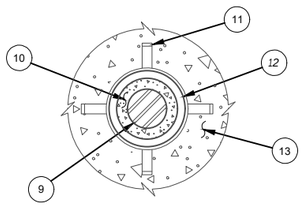
SHT 15 OF X



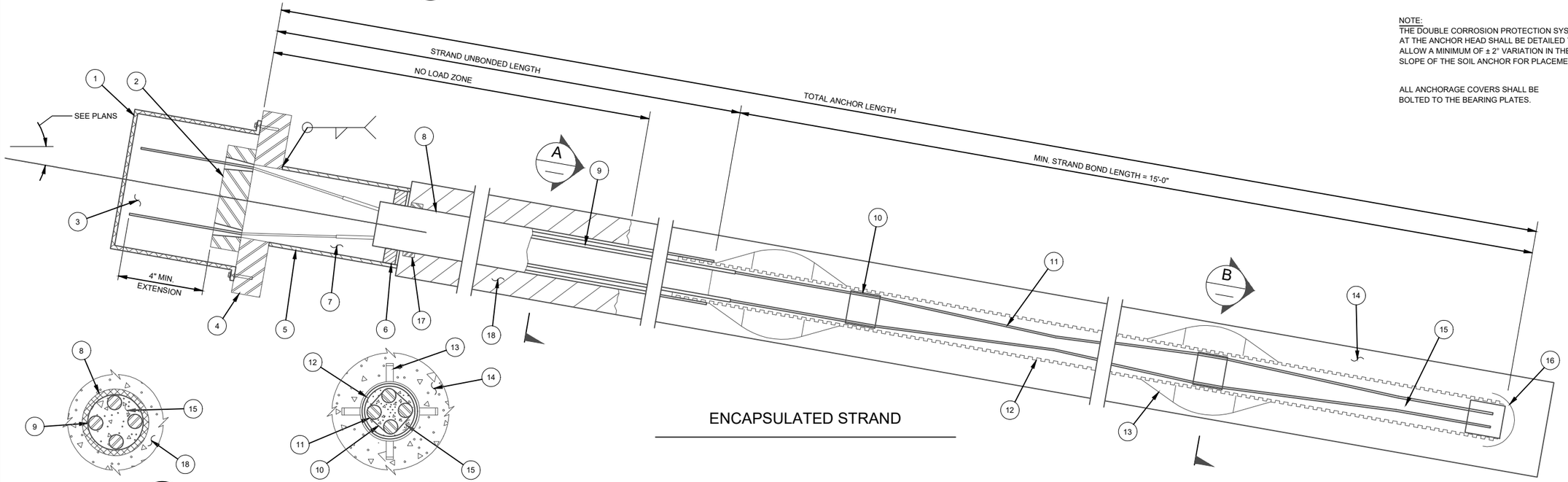
ENCAPSULATED BAR

1. ANCHORAGE COVER
2. NUT
3. ANTICORROSION GREASE*
4. BEARING PLATE
5. TRUMPET
6. ANTICORROSION GREASE
7. SEAL
8. SMOOTH PVC BOND BREAKER
9. BAR
10. ENCAPSULATION GROUT
11. CENTRALIZERS
12. CORRUGATED PVC
13. ANCHOR GROUT
14. END CAP
15. NONSTRUCTURAL FILLER

SECTION C



SECTION D



ENCAPSULATED STRAND

NOTE:
THE DOUBLE CORROSION PROTECTION SYSTEM AT THE ANCHOR HEAD SHALL BE DETAILED TO ALLOW A MINIMUM OF ± 2° VARIATION IN THE SLOPE OF THE SOIL ANCHOR FOR PLACEMENT TOLERANCE.

ALL ANCHORAGE COVERS SHALL BE BOLTED TO THE BEARING PLATES.

1. ANCHORAGE COVER
2. ANCHOR HEAD AND WEDGES
3. ANTICORROSION GREASE
4. BEARING PLATE
5. TRUMPET
6. SEAL
7. ANTICORROSION GREASE
8. PVC OR POLYETHYLENE TUBE
9. INDIVIDUALLY GREASED AND SHEATHED STRAND.
10. SPACER
11. STRAND
12. CORRUGATED PVC
13. CENTRALIZER
14. ANCHOR GROUT
15. ENCAPSULATION GROUT
16. END CAP
17. TENSION RING TO RESIST SPLITTING FORCE OF DEFLECTED STRANDS.
18. NON-STRUCTURAL FILLER

SECTION A

SECTION B

LOCHNER

NO.	DATE	BY	APPR.	REVISIONS

S. JOHNSON 10/21
DESIGNED BY DATE
T. JOHNSON 10/21
DRAWN BY DATE
B. NAKASHOJI 10/21
CHECKED BY DATE

City of Bellevue
Transportation Department

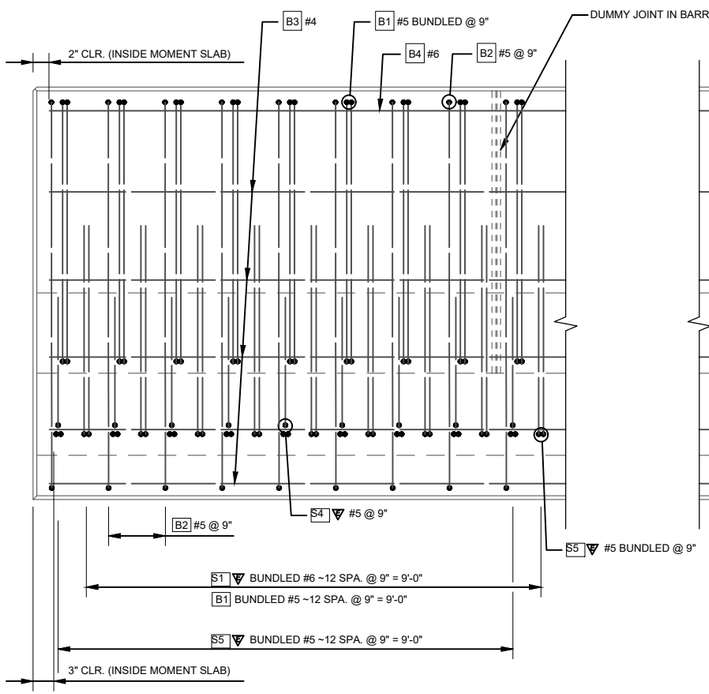
TIMOTHY PAUL JOHNSON — STATE OF WASHINGTON — 20113388 — REGISTERED PROFESSIONAL ENGINEER — PRELIMINARY — NOT FOR CONSTRUCTION

98TH AVE SE AND SE 11TH ST SLOPE STABILIZATION PROJECT

SOLDIER PILE WALL DETAILS
SHEET 2 OF 4

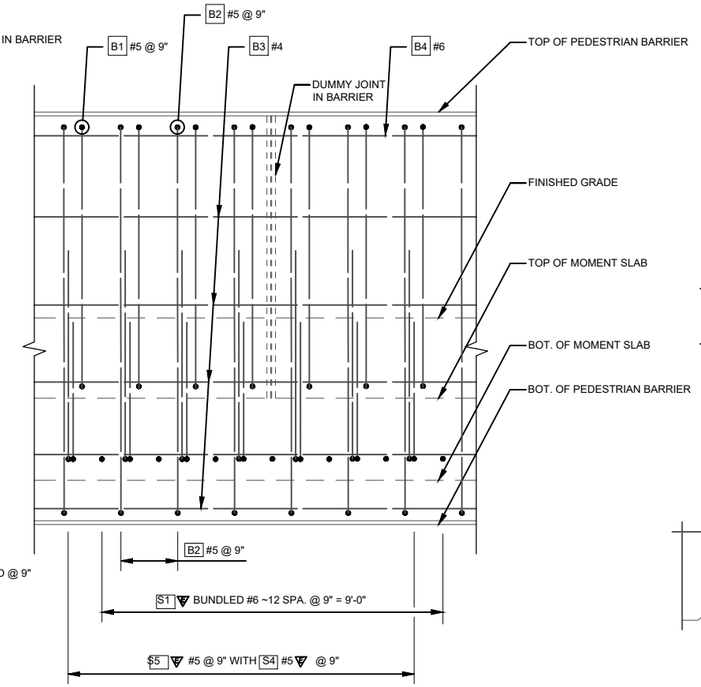
S04

SHT 16 OF X



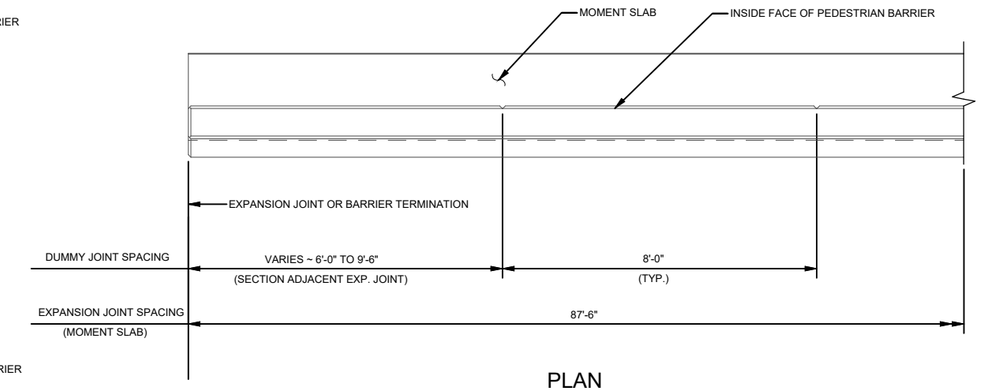
OUTSIDE ELEVATION

END OF PEDESTRIAN BARRIER



OUTSIDE ELEVATION

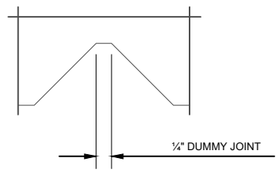
INTERIOR OF PEDESTRIAN BARRIER



PLAN

PEDESTRIAN BARRIER

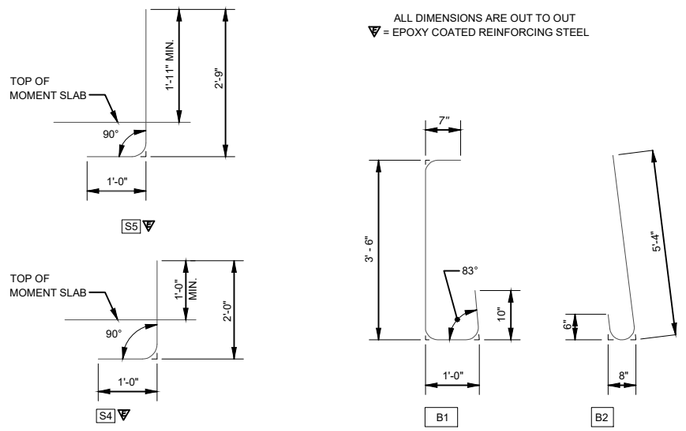
CONSTRUCTION JOINTS WITH SHEAR KEYS ARE PERMISSIBLE AT DUMMY JOINT LOCATIONS.
FORM JOINTS BETWEEN DUMMY JOINTS SHALL NOT BE PERMITTED.

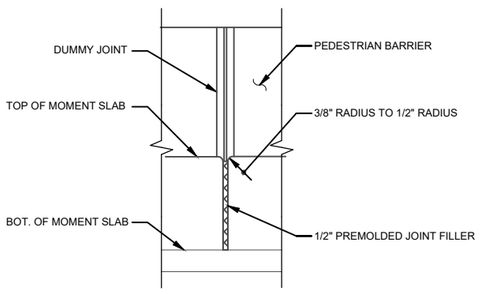


DUMMY JOINT

DETAIL

BENDING DIAGRAM

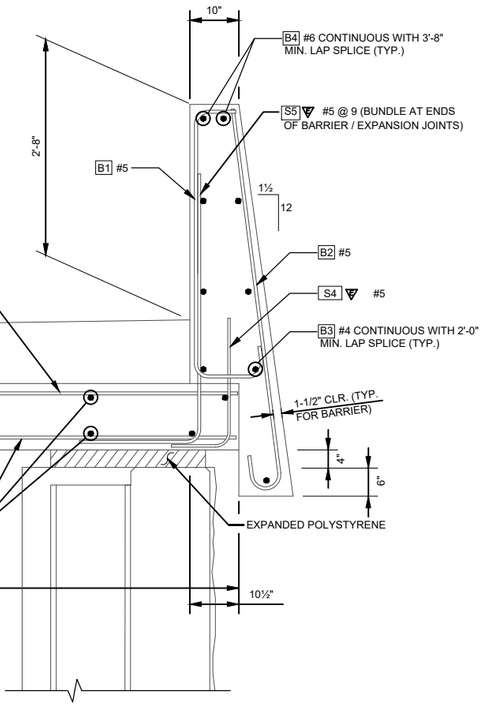




MOMENT SLAB

JOINT DETAIL

REINFORCEMENT NOT SHOWN FOR CLARITY



TYPICAL SECTION

MOMENT SLAB WITH PEDESTRIAN BARRIER

LOCHNER

NO.	DATE	BY	APPR.	REVISIONS

S. JOHNSON — DESIGNED BY — 10/21 DATE
T. JOHNSON — DRAWN BY — 10/21 DATE
B. NAKASHOJI — CHECKED BY — DATE

City of Bellevue
Transportation Department

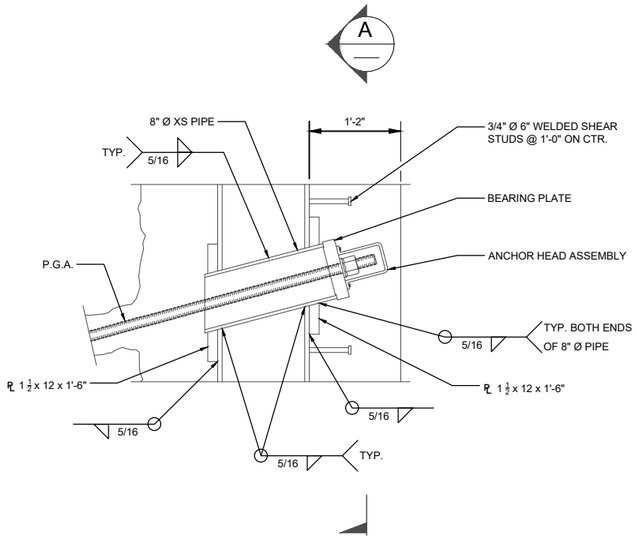
TIMOTHY PAUL JOHNSON — STATE OF WASHINGTON — 20011336 — REGISTERED PROFESSIONAL ENGINEER — PRELIMINARY — NOT FOR CONSTRUCTION

98TH AVE SE AND SE 11TH ST SLOPE STABILIZATION PROJECT

SOLDIER PILE WALL DETAILS
SHEET 3 OF 4

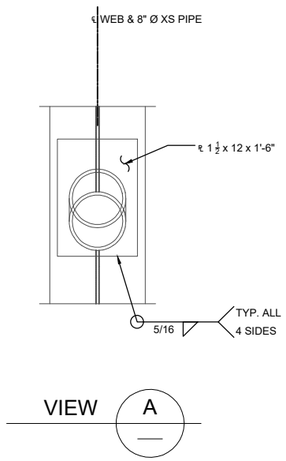
S05

SHT 17 OF X



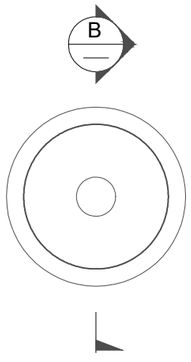
ELEVATION - SOLDIER PILE

WITH P.G.A. THRU WEB



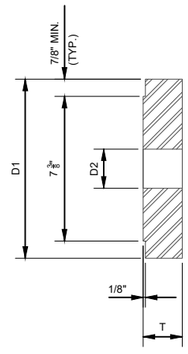
VIEW A

SOLDIER PILE SCHEDULE											
PILE NO.	WALL STATION	SOLDIER PILE SIZE	SHAFT DIAMETER	TOP OF WALL ELEV	BOT OF CONCRETE FASCIA	EMBEDMENT DEPTH "D" (FT)	MIN. BOTTOM OF SHAFT ELEV.	TOP OF PILE ELEV.	TOTAL LENGTH OF SOLDIER PILE (FT)	TOP GROUND ANCHOR DESIGN LOAD (KIPS)	BOT. GROUND ANCHOR DESIGN LOAD (KIPS)
1	10+00.00	HP14x117	2'-0"	171.59	165.90	20.90	145.00	171.34	26.09		
2	10+07.00	HP14x117	2'-0"	172.36	165.90	20.90	145.00	172.11	26.86		
3	10+14.00	HP12x53	2'-0"	173.14	165.90	15.90	150.00	172.89	22.64	57.78	
4	10+21.00	HP12x53	2'-0"	173.91	166.24	16.24	150.00	173.66	23.41	58.29	
5	10+28.00	HP12x53	2'-0"	174.68	166.86	16.86	150.00	174.43	24.18	55.86	
6	10+34.00	HP12x53	2'-0"	175.34	167.49	17.49	150.00	175.09	24.84	53.54	
7	10+40.00	HP12x53	2'-0"	176.00	168.03	18.03	150.00	175.75	25.50	55.92	
8	10+46.00	HP12x53	2'-0"	176.67	168.56	18.56	150.00	176.42	26.17	58.63	
9	10+52.00	HP12x53	2'-0"	177.33	169.09	19.09	150.00	177.08	26.83	61.61	
10	10+58.00	HP12x53	2'-0"	177.99	169.62	19.62	150.00	177.74	27.49	64.83	
11	10+64.00	HP12x53	2'-0"	178.65	170.16	20.16	150.00	178.40	28.15	68.27	
12	10+70.00	HP12x53	2'-0"	179.31	170.69	20.69	150.00	179.06	28.81	71.90	
13	10+76.00	HP12x53	2'-0"	179.98	171.23	21.23	150.00	179.73	29.48	75.71	
14	10+82.00	HP12x53	2'-0"	180.64	171.76	21.76	150.00	180.39	30.14	79.70	
15	10+88.00	HP12x53	2'-0"	181.09	172.21	22.21	150.00	180.84	30.59	82.50	
16	10+94.00	HP12x53	2'-0"	181.29	172.83	22.83	150.00	181.04	30.79	90.77	
17	11+01.00	HP12x53	2'-0"	181.52	172.62	22.62	150.00	181.27	31.02	99.48	
18	11+08.00	HP12x53	2'-0"	181.71	172.26	22.26	150.00	181.46	31.21	100.93	
19	11+15.00	HP12x53	2'-0"	181.90	171.98	21.98	150.00	181.65	31.40	95.08	
20	11+21.00	HP12x53	2'-0"	182.06	171.48	21.48	150.00	181.81	31.56	109.37	60.33
21	11+32.00	HP12x53	2'-0"	181.79	171.20	21.20	150.00	181.54	31.29	108.25	57.72
22	11+38.00	HP12x53	2'-0"	180.86	170.97	20.97	150.00	180.61	30.36	87.82	
23	11+45.00	HP12x53	2'-0"	180.39	170.64	20.64	150.00	180.14	29.89	84.71	
24	11+51.00	HP12x53	2'-0"	179.99	170.64	20.64	150.00	179.74	29.49	75.80	
25	11+57.00	HP12x53	2'-0"	179.59	170.64	20.64	150.00	179.34	29.09	73.47	
26	11+63.00	HP12x53	2'-0"	179.19	170.64	20.64	150.00	178.94	28.69	71.21	
27	11+69.00	HP12x53	2'-0"	178.79	170.64	20.64	150.00	178.54	28.29	69.01	
28	11+75.00	HP12x53	2'-0"	178.39	170.64	20.64	150.00	178.14	27.89	72.46	
29	11+82.00	HP12x53	2'-0"	177.92	170.64	20.64	150.00	177.67	27.42	75.25	
30	11+89.00	HP12x53	2'-0"	177.46	170.64	20.64	150.00	177.21	26.96	72.59	
31	11+96.00	HP14x117	2'-0"	176.99	170.64	30.64	140.00	176.74	36.49		
32	12+03.00	HP14x117	2'-0"	176.52	170.64	30.64	140.00	176.27	36.02		
33	12+11.00	HP14x117	2'-0"	175.99	170.64	25.64	145.00	175.74	30.49		



BEARING PLATE

BEARING PLATE SHALL BE SIZED IN ACCORDANCE WITH THE STANDARD SPECIFICATION SECTION 6-17.3(5).



SECTION B

LOCHNER

NO.	DATE	BY	APPR.	REVISIONS

S. JOHNSON 10/21 DESIGNED BY DATE
T. JOHNSON 10/21 DRAWN BY DATE
B. NAKASHOJI 10/21 CHECKED BY DATE

City of Bellevue
Transportation Department

TIMOTHY PAUL — STATE OF WASHINGTON — 19711336 — REGISTERED PROFESSIONAL ENGINEER — PRELIMINARY NOT FOR CONSTRUCTION

98TH AVE SE AND SE 11TH ST SLOPE STABILIZATION PROJECT

SOLDIER PILE WALL DETAILS
SHEET 4 OF 4

S06

SHT 18 OF X

CONSTRUCTION NOTES

1. CONSTRUCT SOLDIER PILE WALL PER DETAILS ON SHEETS S01 - S06
2. CONSTRUCT HMA PAVEMENT REPLACEMENT AND CURB AND GUTTER PER COB STD DWG NO RC-240-1
3. GRAVEL BORROW OVER MOMENT SLAB AND GRAVEL BACKFILL FOR WALL. SEE ROADWAY SECTIONS AND SHEET S01 FOR LIMITS
4. CONSTRUCT CEMENT CONCRETE TRAFFIC CURB AND GUTTER PER COB STD DWG NO SW-100-1
5. REPAIR EXISTING ASPHALT, CURB PER WSDOT STD DWG F-10.42-00 (TYPE 5), AND EXISTING SIDEWALK. MATCH EXISTING.
6. CONSTRUCT HMA PAVEMENT REPLACEMENT FOR TRENCH PER COB STD DWG NO RC-190-1
7. GRIND AND OVERLAY 2" WITH HMA CL. 1/2" PG 58H-22
8. INSTALL "CHISM BEACH PARK" SIGN PROVIDED BYCITY OF BELLEVUE PARKS AND COMMUNITY SERVICES DEPARTMENT
9. INSTALL SPEED HUMP PER COB STD DWG NO RC-170-1
10. ADJUST MONUMENT CASE AND COVER
11. INSTALL STOP SIGN (R1-1)

CHANNELIZATION NOTES

1. PROVIDE AND INSTALL YELLOW DOUBLE CENTERLINE USING TYPE 1 AND TYPE 2 RPMS PER COB STD DWGS NO CH-100-1 AND CH-120-1.
2. INSTALL 4" WHITE PAINT EDGE LINE
3. INSTALL 12" WIDE PLASTIC STOP BAR

CHANNELIZATION GENERAL NOTES

1. ALL EXISTING RAISED PAVEMENT MARKINGS AND PLASTIC MARKINGS SHALL BE REMOVED AND RESTORED IN OVERLAY AREAS.

CONSTRUCTION LEGEND

- NEW WALL
- NEW FULL DEPTH HMA
- GRIND AND OVERLAY
- GRAVEL BORROW

CURVE DATA FOR CURB AND GUTTER

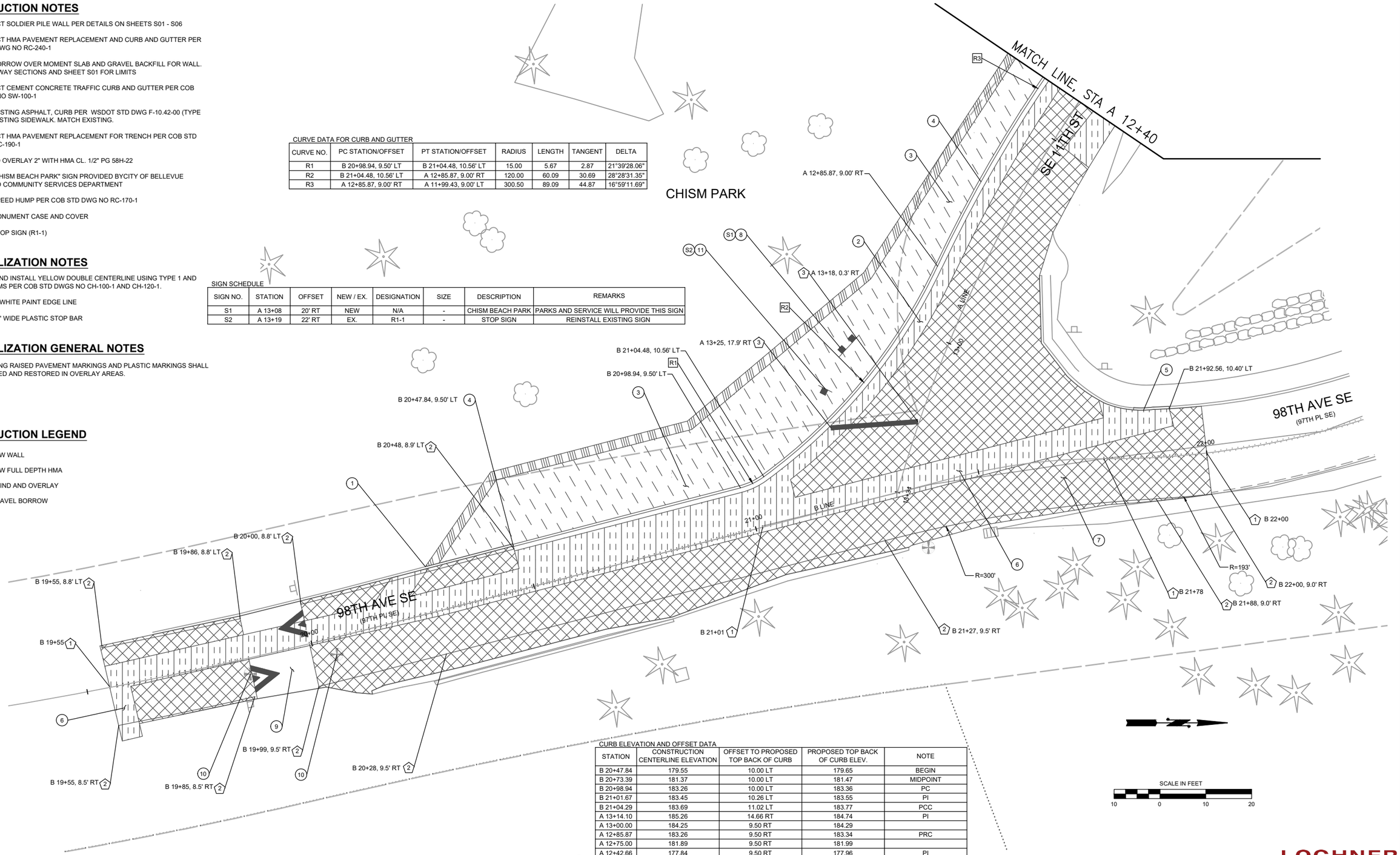
CURVE NO.	PC STATION/OFFSET	PT STATION/OFFSET	RADIUS	LENGTH	TANGENT	DELTA
R1	B 20+98.94, 9.50' LT	B 21+04.48, 10.56' LT	15.00	5.67	2.87	21°39'28.06"
R2	B 21+04.48, 10.56' LT	A 12+85.87, 9.00' RT	120.00	60.09	30.69	28°28'31.35"
R3	A 12+85.87, 9.00' RT	A 11+99.43, 9.00' LT	300.50	89.09	44.87	16°59'11.69"

SIGN SCHEDULE

SIGN NO.	STATION	OFFSET	NEW / EX.	DESIGNATION	SIZE	DESCRIPTION	REMARKS
S1	A 13+08	20' RT	NEW	N/A	-	CHISM BEACH PARK	PARKS AND SERVICE WILL PROVIDE THIS SIGN
S2	A 13+19	22' RT	EX.	R1-1	-	STOP SIGN	REINSTALL EXISTING SIGN

CURB ELEVATION AND OFFSET DATA

STATION	CONSTRUCTION CENTERLINE ELEVATION	OFFSET TO PROPOSED TOP BACK OF CURB	PROPOSED TOP BACK OF CURB ELEV.	NOTE
B 20+47.84	179.55	10.00 LT	179.65	BEGIN
B 20+73.39	181.37	10.00 LT	181.47	MIDPOINT
B 20+98.94	183.26	10.00 LT	183.36	PC
B 21+01.67	183.45	10.26 LT	183.55	PI
B 21+04.29	183.69	11.02 LT	183.77	PCC
A 13+14.10	185.26	14.66 RT	184.74	PI
A 13+00.00	184.25	9.50 RT	184.29	
A 12+85.87	183.26	9.50 RT	183.34	PRC
A 12+75.00	181.89	9.50 RT	181.99	
A 12+42.66	177.84	9.50 RT	177.96	PI



LOCHNER

NO.	DATE	BY	APPR.	REVISIONS

C. NEAL 10/21
DESIGNED BY DATE
C. NEAL 10/21
DRAWN BY DATE
J. TUTTLE 10/21
CHECKED BY DATE

City of Bellevue
Transportation Department

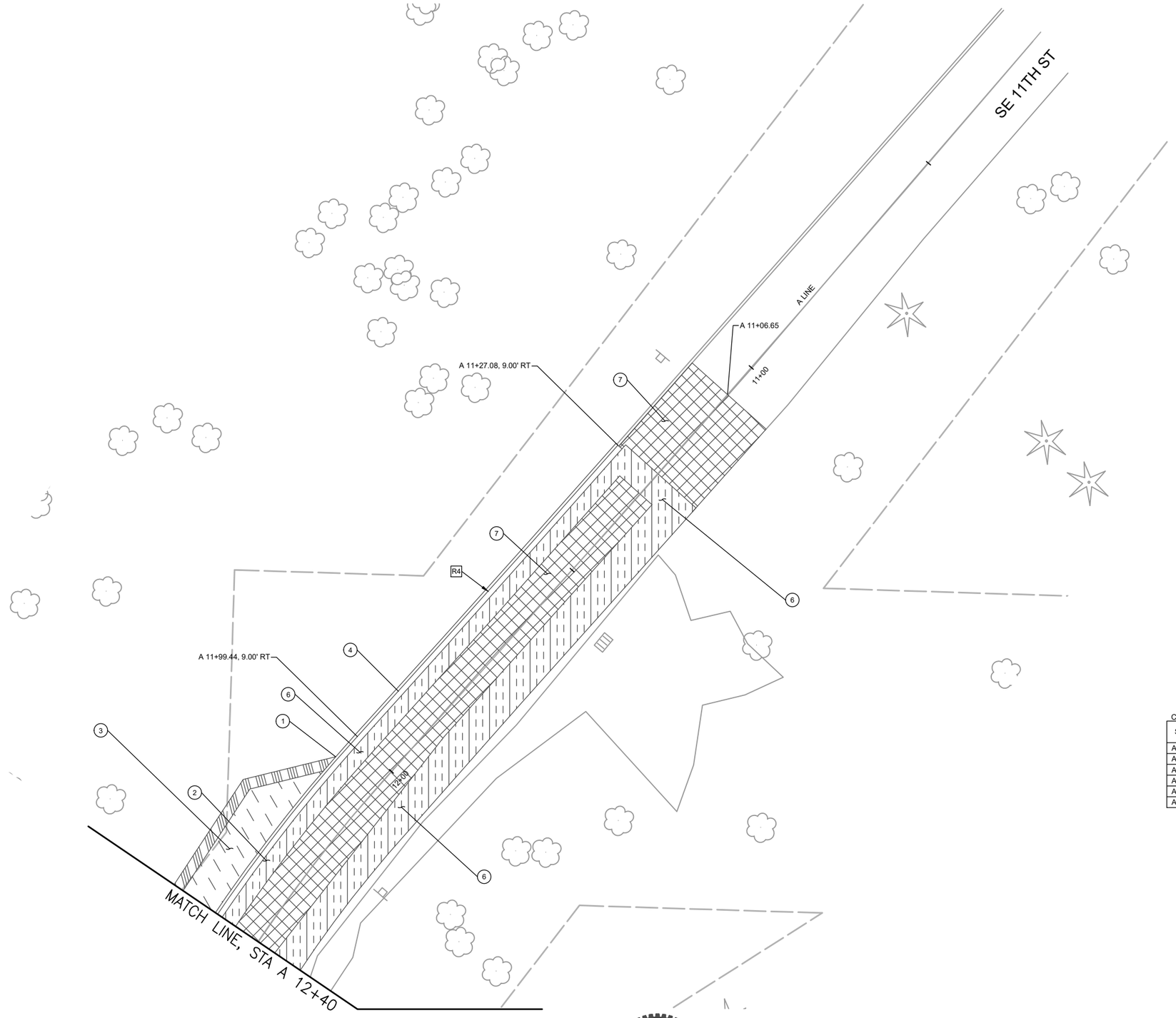
CHRISTOPHER DAVIS — STATE OF WASHINGTON — PRELIMINARY — 53225 — REGISTERED PROFESSIONAL ENGINEER

98TH AVE SE AND SE 11TH ST SLOPE STABILIZATION PROJECT

ROADWAY PLANS

RD01

SHT 19 OF X



CONSTRUCTION NOTES

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CHANNELIZATION NOTES

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CHANNELIZATION GENERAL NOTES

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CONSTRUCTION LEGEND

- NEW WALL
- NEW FULL DEPTH HMA
- GRIND AND OVERLAY
- GRAVEL BORROW

CURVE DATA FOR CURB AND GUTTER

CURVE NO.	PC STATION/OFFSET	PT STATION/OFFSET	RADIUS	LENGTH	TANGENT	DELTA
R4	A 11+99.43, 9.00' LT	A 11+27.08, 9.00' LT	5856.00	72.26	36.13	0°42'25.05"

CURB ELEVATION AND OFFSET DATA

STATION	CONSTRUCTION CENTERLINE ELEVATION	OFFSET TO PROPOSED TOP BACK OF CURB	PROPOSED TOP BACK OF CURB ELEV.	NOTE
A 12+25.00	175.79	9.50 RT	175.91	
A 11+99.45	172.90	9.50 RT	173.02	PRC
A 11+75.00	170.21	9.50 RT	170.33	
A 11+63.26	169.15	9.50 RT	169.27	PI
A 11+50.00	167.99	9.50 RT	168.11	
A 11+27.08	165.85	9.50 RT	165.97	PC

SCALE IN FEET
10 0 10 20

LOCHNER

NO.	DATE	BY	APPR.	REVISIONS

C. NEAL 10/21 DESIGNED BY DATE
C. NEAL 10/21 DRAWN BY DATE
J. TUTTLE 10/21 CHECKED BY DATE

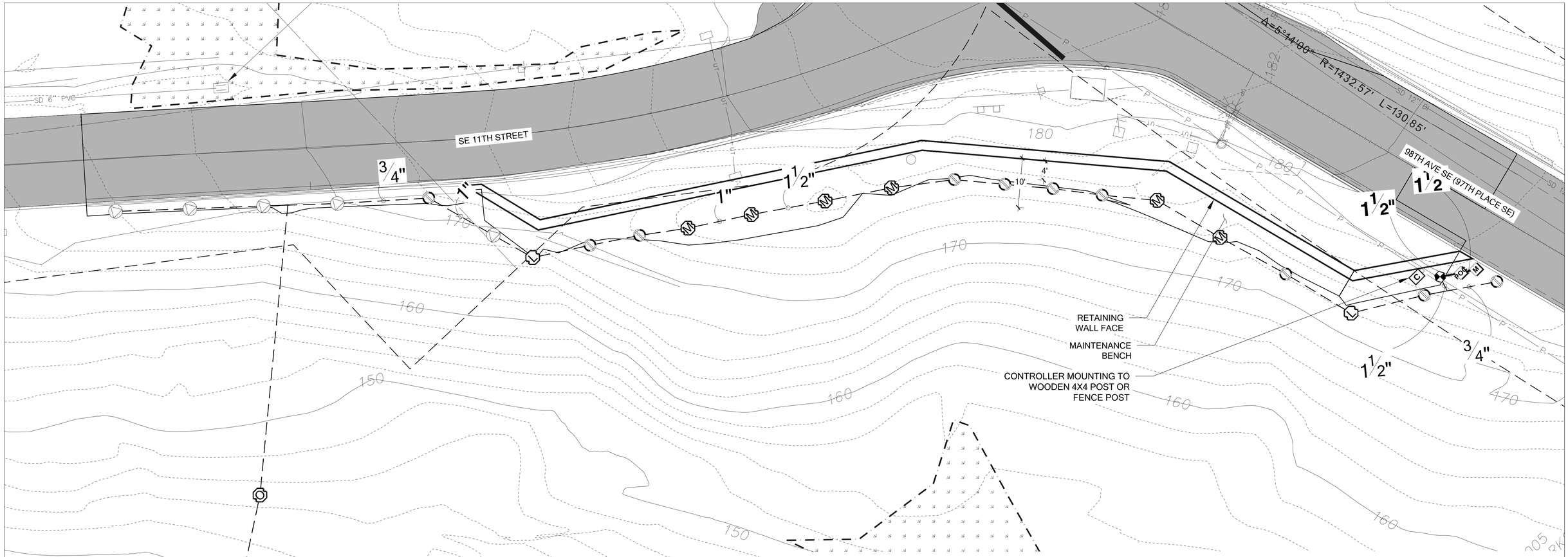
City of Bellevue
Transportation Department

CHRISTOPHER DAVIS STATE OF WASH 53225 REGISTERED PROFESSIONAL ENGINEER PRELIMINARY

98TH AVE SE AND SE 11TH ST SLOPE STABILIZATION PROJECT

ROADWAY PLANS

RD02 SHT 20 OF X



IRRIGATION NOTES

1. COORDINATE INSTALLATION OF IRRIGATION SYSTEM WITH INSTALLATION OF OTHER UTILITIES. LOCATE AND PROTECT ALL UNDERGROUND UTILITIES DURING INSTALLATION OF IRRIGATION SYSTEM. CONTRACTOR MUST COORDINATE SLEEVING WITH INSTALLATION OF UNDERGROUND UTILITIES (INCLUDING ELECTRICAL, SEWER, WATER AND GAS) SIDEWALK, URBAN DESIGN FEATURES, ILLUMINATION AND SIGNALIZATION EQUIPMENT.
2. IRRIGATION SYSTEM SHALL BE INSTALLED, TESTED, MAINTAINED AND GUARANTEED AS PER SPECIFICATIONS.
3. IRRIGATION SYSTEM IS DESIGNED TO OPERATE AT 30-35 PSI. CONTRACTOR SHALL FIELD CHECK EXISTING WATER PRESSURE, ADJUSTING PRV AS NECESSARY TO PROVIDE OPTIMUM PERFORMANCE.
4. LOCATIONS OF IRRIGATION MAIN LINE, LATERALS, SLEEVING AND VALVES INDICATED ON DRAWINGS ARE SCHEMATIC ONLY. ADJUST LOCATIONS AS NECESSARY. DO NOT OVER-SPRAY ONTO PAVED SURFACES.
5. MAIN LINE SHALL BE BURIED TO A DEPTH OF 24" BELOW FINISH GRADE. LATERAL LINE SHALL BE BURIED TO A DEPTH OF 18" BELOW FINISH GRADE.
6. SLEEVE UNDER ALL PAVED SURFACES AND CONCRETE SIDEWALK. SEE IRRIGATION PLANS FOR LOCATION OF PVC SLEEVING. SLEEVING UNDER SIDEWALKS SHALL BE A MIN OF 4" AND UNDER ROADWAY PAVEMENT A MIN OF 6". SLEEVING SLEEVING SHALL BE AT LEAST (2) TIMES THE DIAMETER OF THE INSERT PIPE AND WIRES. WHERE FEASIBLE COORDINATE PLACEMENT OF . WHERE FEASIBLE COORDINATE PLACEMENT OF IRRIGATION LINES NEXT TO OR IN OTHER UTILITY TRENCHES TO MINIMIZE ROAD CROSSINGS.
7. CONTROLLER WIRES SHALL BE TAPED TO IRRIGATION MAIN LINE WHERE POSSIBLE. IF NOT AVAILABLE, WIRES TO CONTROLLER SHALL BE PLACED IN 1 "DIA (MIN) SLEEVE, USE 3M DBY 12"DIA (MIN) SLEEVE, USE 3M DBY SPLICE KITS.
8. ALL EQUIPMENT SHALL BE AS SPECIFIED OR APPROVED EQUAL. SYSTEM IS SPECIFICALLY DESIGNED FOR IRRIGATION EQUIPMENT SHOWN ON PLANS AND SUBSTITUTION WILL REQUIRE REDESIGN AND RECALCULATION OF IRRIGATION ZONES.
9. THE CONTRACTOR SHALL REMOVE THE PAVEMENT PER SHEET 4 AND PROVIDE TRENCHING FOR THE WATER METER CONNECTION WORK. THE CITY OF BELLEVUE WILL INSTALL THE SERVICE LINE INCLUDING CONNECTION TO EXISTING WATER MAIN, AND PLACE SETTER AND WATER METER. THE CONTRACTOR SHALL BACKFILL THE TRENCHED AREA, PERFORM COMPACTION TEST, AND PAVE PER SHEET 6.

IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER / MODEL	DESCRIPTION
LST RST SST	HUNTER MP STRIP PROS-12-PRS40-CV-F	SHRUB ROTATOR, 12" POP-UP WITH FACTORY INSTALLED CHECK VALVE, FLOGUARD, PRESSURE REGULATED TO 40 PSI, MP ROTATOR NOZZLE. LST=IVORY LEFT STRIP, SST=BROWN SIDE STRIP, RST=COPPER RIGHT STRIP, ON PRS40 BODY. INSTALL FLEXIBLE RISER PER COB STANDARD DETAIL PK-IR-10D.
ADJ. 360	HUNTER MP800SR PROS-12-PRS40-CV-F	SHRUB ROTATOR, 12.0" POP-UP WITH CHECK VALVE, FLOGUARD, PRESSURE REGULATED TO 40 PSI, MP ROTATOR NOZZLE ON PRS40 BODY. OR = ORANGE ADJ ARC 90 TO 210. INSTALL FLEXIBLE RISER PER COB STANDARD DETAIL PK-IR-10D.
M L O	HUNTER MP815 PROS-12-PRS40-CV-F	SHRUB ROTATOR, 12" POP-UP WITH CHECK VALVE, FLOGUARD, PRESSURE REGULATED TO 40 PSI, MP ROTATOR NOZZLE. M=MAROON AND GRAY ADJ ARC 90 TO 210, L=LIGHT BLUE AND GRAY 210 TO 270 ARC, O=OLIVE AND GRAY 360 ARC ON PRS40 BODY. INSTALL FLEXIBLE RISER PER COB STANDARD DETAIL PK-IR-10D.
C	HUNTER XC-H-600	PROVIDE 3 SPARE WIRES (RED) FROM CONTROLLER THROUGH EACH CONTROL VALVE BOX, TO FURTHEST VALVE BOX. INSTALL PER COB STANDARD DETAILS PK-IR-14B, PK-IR-16A AND PK-IR-16D
	RAIN BIRD PEB	AUTOMATIC CONTROL VALVE - SIZE AS NOTED ON PLAN. INSTALL PER COB STANDARD DETAIL PK-IR-08A
		IRRIGATION LATERAL LINE: PVC SCHEDULE 40
		IRRIGATION MAINLINE: PVC SCHEDULE 40
POC	POINT OF CONNECTION EQUIPMENT (B) INSTALL PER CITY OF BELLEVUE DETAIL PK-IR-01D, INCLUDING 1 1/2" DCVA, 1 1/2" MASTER VALVE, FLOW SENSOR, PRV (IF REQUIRED) AND QUICK COUPLER.	
M	WATER METER 1" (TO BE INSTALLED BY CITY)	

SCALE IN FEET
10 0 10 20

NO.	DATE	BY	APPR.	REVISIONS

RH/KMB 10/12/2021 DESIGNED BY DATE
RH/KMB 10/12/2021 DRAWN BY DATE
AMC/JKB 10/12/2021 CHECKED BY DATE

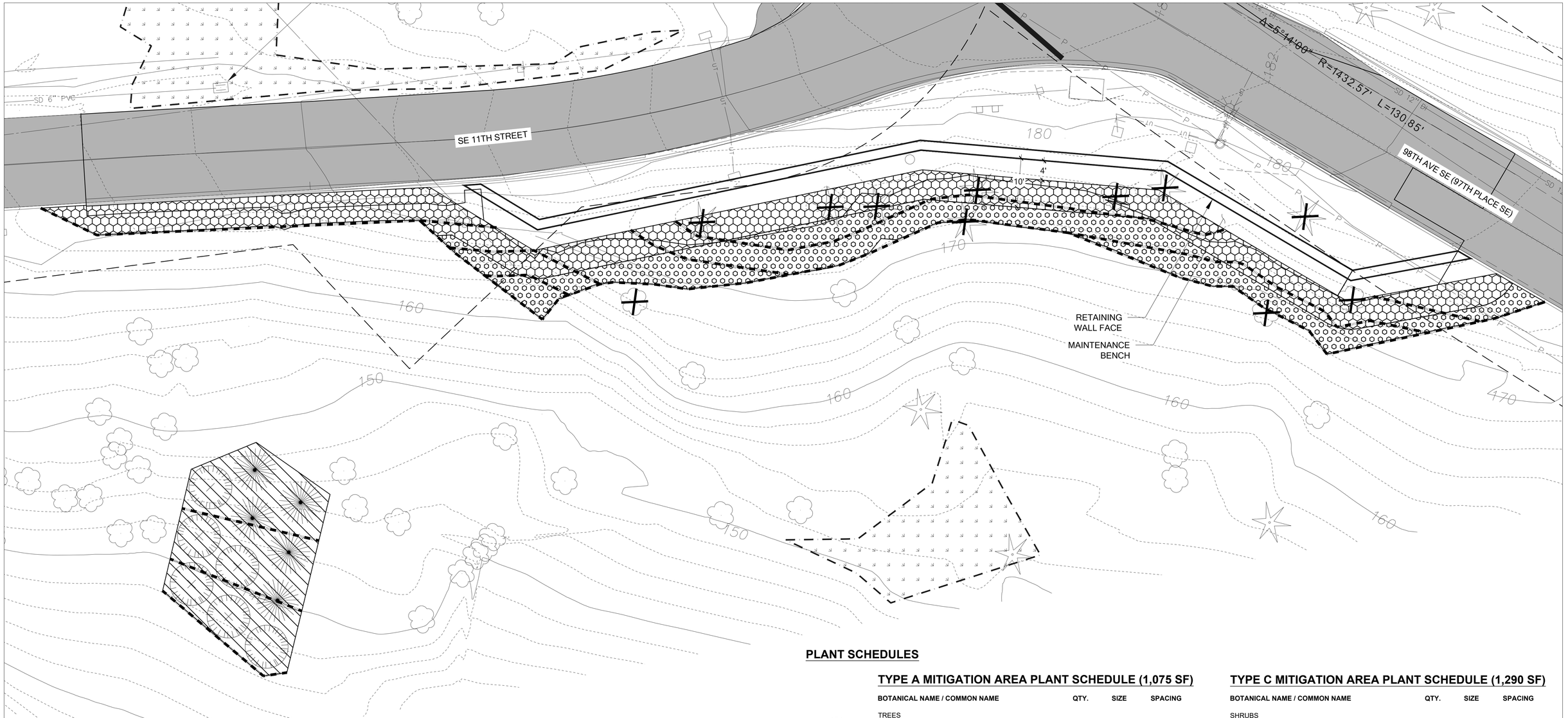
City of Bellevue
Transportation Department

98TH AVE SE AND SE 11TH ST SLOPE STABILIZATION PROJECT

IRRIGATION PLAN AND SCHEDULE

L02

SHT 25 OF 25



LEGEND

- RIGHT-OF-WAY
- DELINEATED WETLAND
- PREVIOUSLY REMOVED TREE
- TYPE A MITIGATION AREA (1,075 SF)
- TYPE B MITIGATION AREA (1,860 SF)
- TYPE C MITIGATION AREA (1,290 SF)
- WATTLE (750 LF)

SCALE IN FEET
10 0 10 20

MITIGATION NOTES

1. ALL PLANTING AREA PREPARATION TO BE COMPLETED PER WSDOT STANDARD SPECIFICATION 8-02.3(5)C.
2. WATTLES TO BE PLACED PER PLAN AND FIELD ADJUSTED AS NEEDED ACCORDING TO WSDOT STANDARD SPECIFICATION 8-01.3(10) AND STANDARD PLAN I-30.30-02.
3. SOIL AMENDMENTS, INCLUDING FINE COMPOST AND WOOD CHIP MULCH TO BE INSTALLED PER WSDOT STANDARD SPECIFICATIONS 8-02.3(6) AND 8-02.3(11)B.
4. PLANTS TO BE INSTALLED PER WSDOT STANDARD SPECIFICATION 8-02.3(8) AND STANDARD PLAN H-10.10-00.
5. SEE SPECIAL PROVISIONS FOR BIDDER DESIGNED IRRIGATION SYSTEM.
6. PLANT INSTALLATION WITHIN MITIGATION AREAS SHALL PRESERVE ALL EXISTING NATIVE VEGETATION. WORK WITHIN ROOT ZONES OF TREES SHALL BE DONE BY HAND.
7. SHRUBS AND GROUNDCOVERS INSTALLED WITHIN MITIGATION AREAS TO BE SPACED TRIANGULARLY AND DISTRIBUTED BY SPECIES IN GROUPS OF 5-9.

PLANT SCHEDULES

TYPE A MITIGATION AREA PLANT SCHEDULE (1,075 SF)

BOTANICAL NAME / COMMON NAME	QTY.	SIZE	SPACING
TREES			
THUJA PLICATA / WESTERN RED CEDAR	6	1 GAL.	PER PLAN
TSUGA HETEROPHYLLA / WESTERN HEMLOCK	5	1 GAL.	PER PLAN
TREE QUANTITY:	11		

TYPE B MITIGATION AREA PLANT SCHEDULE (1,860 SF)

BOTANICAL NAME / COMMON NAME	QTY.	SIZE	SPACING
GROUNDCOVERS			
GAULTHERIA SHALLON / SALAL	80	1 GAL.	3' O.C.
MAHONIA NERVOSA / DULL OREGON GRAPE	80	1 GAL.	3' O.C.
POLYSTICHUM MUNITUM / SWORD FERN	80	1 GAL.	3' O.C.
GROUNDCOVER QUANTITY:	240		

TYPE C MITIGATION AREA PLANT SCHEDULE (1,290 SF)

BOTANICAL NAME / COMMON NAME	QTY.	SIZE	SPACING
SHRUBS			
OEMLERIA CERASIFORMIS / OSOBERRY	10	1 GAL.	5' O.C.
RIBES SANGUINIUM / RED-FLOWERING CURRANT	10	1 GAL.	5' O.C.
ROSA NUTKANA / NOOTKA ROSE	10	1 GAL.	5' O.C.
RUBUS PARVIFLORUS / THIMBLEBERRY	10	1 GAL.	5' O.C.
RUBUS SPECTABILIS / SALMONBERRY	10	1 GAL.	5' O.C.
SYMPHORICARPOS ALBUS / SNOWBERRY	10	1 GAL.	5' O.C.
SHRUB QUANTITY:	60		
GROUNDCOVERS			
GAULTHERIA SHALLON / SALAL	35	1 GAL.	3' O.C.
MAHONIA NERVOSA / DULL OREGON GRAPE	35	1 GAL.	3' O.C.
POLYSTICHUM MUNITUM / SWORD FERN	35	1 GAL.	3' O.C.
GROUNDCOVER QUANTITY:	105		

NO.	DATE	BY	APPR.	REVISIONS

RH/KMB — DESIGNED BY — 10/12/2021 DATE
RH/KMB — DRAWN BY — 10/12/2021 DATE
AMC/JKB — CHECKED BY — 10/12/2021 DATE

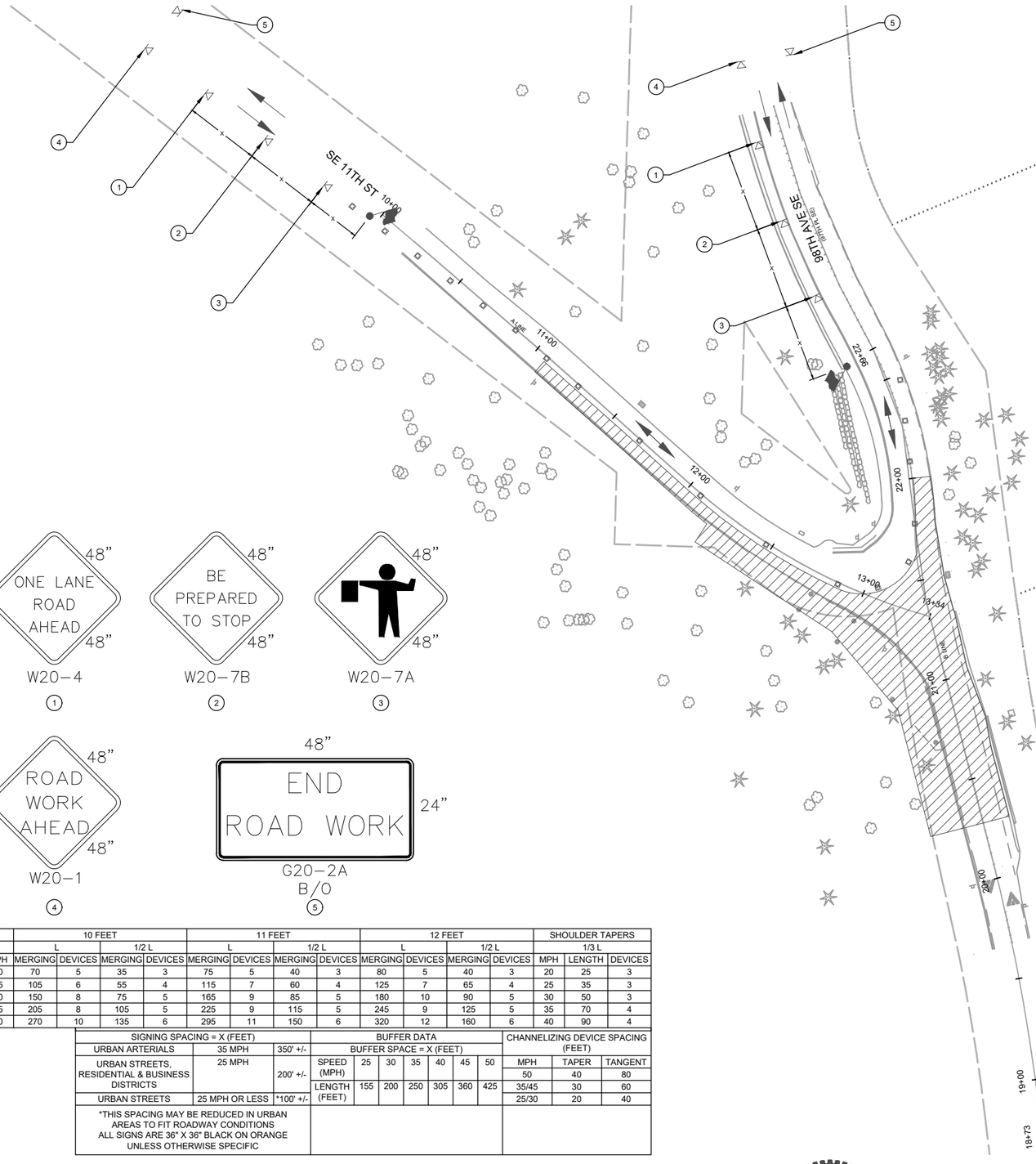
City of Bellevue
Transportation Department

98TH AVE SE AND SE 11TH ST SLOPE STABILIZATION PROJECT

MITIGATION PLAN AND PLANT SCHEDULES

L01

SHT 24 OF 24



TRAFFIC CONTROL NOTES

1. THE CONTRACTOR SHALL MAINTAIN 10 FOOT MINIMUM TRAVEL LANES EXCEPT DURING FINAL PAVEMENT RESTORATION.
2. ALTERNATING ONE-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES UNLESS OTHERWISE SHOWN IN THE PLANS OR APPROVED BY THE CITY.
3. TRAFFIC CONTROL PLANS HAVE BEEN PROVIDED FOR USE ON THIS PROJECT. THE CONTRACTOR SHALL SUBMIT PROJECT SPECIFIC TRAFFIC CONTROL PLANS FOR OPERATIONS THAT DIFFER FROM THE PLANS PROVIDED FOR APPROVAL BY THE CITY AT LEAST 14 DAYS PRIOR TO START OF CONSTRUCTION.
4. THE HOURS FOR CONSTRUCTION ACTIVITY, LANE CLOSURES, OR ACTIVITIES THAT IMPEDE OR MAY POTENTIALLY IMPEDE TRAFFIC SHALL BE ESTABLISHED THROUGH THE APPROVAL PROCESS FOR EACH INDIVIDUAL TEMPORARY TRAFFIC CONTROL PLAN FOR EACH SPECIFIC ACTIVITY. THE WORK HOURS SHALL BE AS STATED ON THE TEMPORARY TRAFFIC CONTROL PLAN OR SHALL BE COMMUNICATED BY THE INSPECTOR ASSIGNED TO THE PROJECT. THE HOURS FOR CONSTRUCTION ACTIVITY IN THE RIGHT OF WAY THAT DOES NOT IMPEDE TRAFFIC SHALL BE MONDAY THROUGH FRIDAY, 7:00AM TO 6:00PM.
5. PEDESTRIAN ACCESS SHALL BE MAINTAINED AT ALL TIMES AND SHALL BE NOT BE IMPEDED. CLOSED TRENCHES, TEMPORARY PAVING SURFACES AND PEDESTRIAN ROUTES SHALL HAVE A STABLE, FIRM AND SLIP RESISTANT WALKING SURFACE MADE EVEN WITH THE SURROUNDING SURFACES. COMPACTED GRAVEL IS NOT CONSIDERED AN ACCEPTABLE WALKING SURFACE.

TRAFFIC CONTROL LEGEND

- CHANNELIZATION DEVICE
- CONSTRUCTION SIGN
- WORK ZONE
- FLAGGER
- DIRECTION OF TRAVEL

W20–4

①

W20–7B

②

W20–7A

③

W20–1

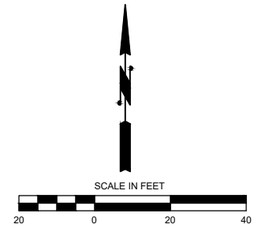
④

G20–2A
B/O

⑤

	10 FEET				11 FEET				12 FEET				SHOULDER TAPERS		
	L		1/2 L		L		1/2 L		L		1/2 L		1/3 L		
MPH	MERGING	DEVICES	MERGING	DEVICES	MERGING	DEVICES	MERGING	DEVICES	MERGING	DEVICES	MERGING	DEVICES	MPH	LENGTH	DEVICES
20	70	5	35	3	75	5	40	3	80	5	40	3	20	25	3
25	105	6	55	4	115	7	60	4	125	7	65	4	25	35	3
30	150	8	75	5	165	9	85	5	180	10	90	5	30	50	3
35	205	8	105	5	225	9	115	5	245	9	125	5	35	70	4
40	270	10	135	6	295	11	150	6	320	12	160	6	40	90	4

SIGNING SPACING = X (FEET)			BUFFER DATA							CHANNELIZING DEVICE SPACING (FEET)		
URBAN ARTERIALS	35 MPH	350' +/-	BUFFER SPACE = X (FEET)									
URBAN STREETS, RESIDENTIAL & BUSINESS DISTRICTS	25 MPH	200' +/-	SPEED (MPH)	25	30	35	40	45	50	MPH	TAPER	TANGENT
										50	40	80
			LENGTH (FEET)	155	200	250	305	360	425	35/45	30	60
URBAN STREETS	25 MPH OR LESS	*100' +/-								25/30	20	40
*THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS ALL SIGNS ARE 36" X 36" BLACK ON ORANGE UNLESS OTHERWISE SPECIFIC												



LOCHNER

NO.	DATE	BY	APPR.	REVISIONS

C. NEAL 10/21
DESIGNED BY DATE
C. NEAL 10/21
DRAWN BY DATE
J. TUTTLE 10/21
CHECKED BY DATE

City of Bellevue
Transportation Department

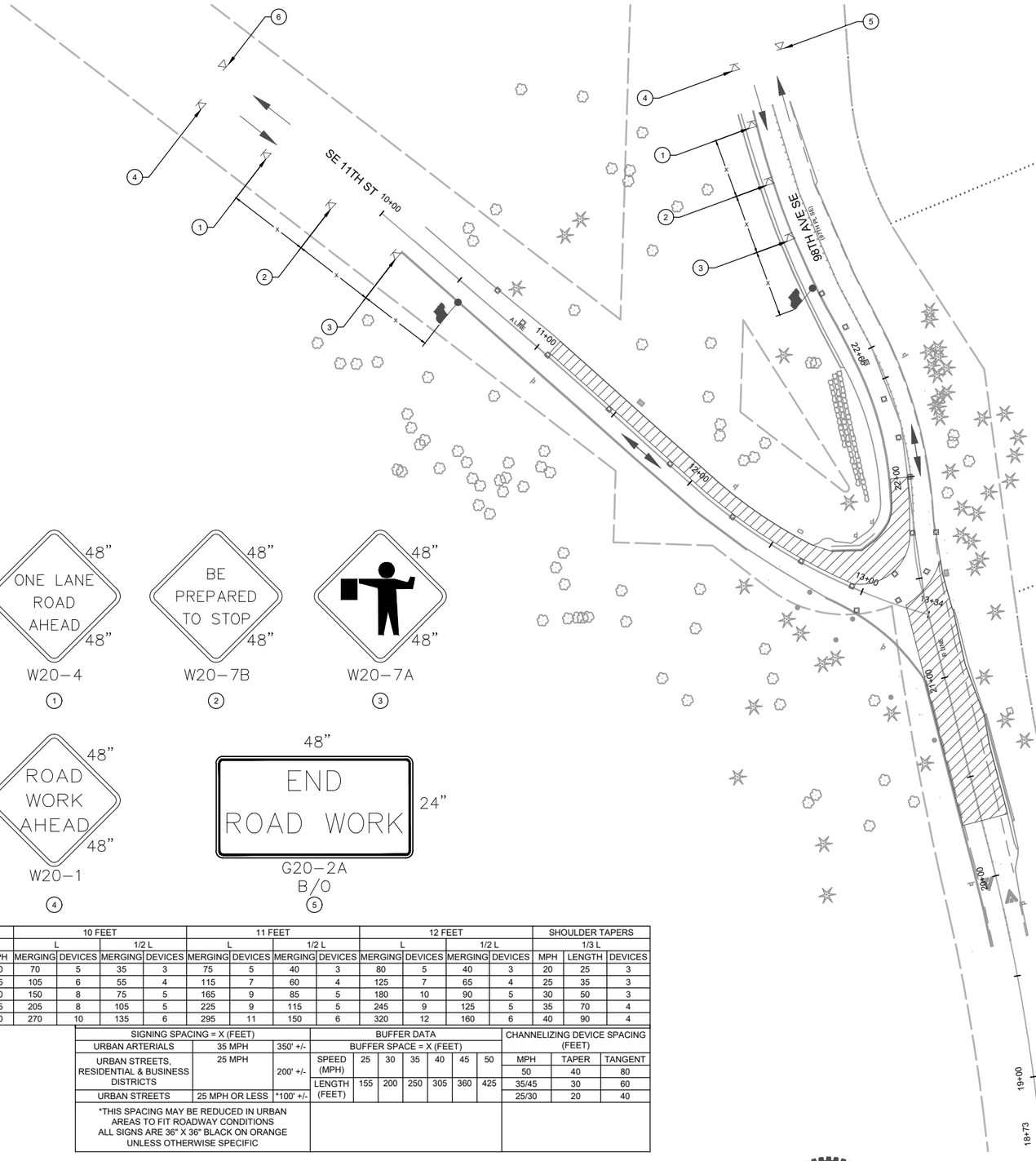
YONG LIANG ZHU
STATE OF WASHINGTON
42347
REGISTERED PROFESSIONAL ENGINEER
PRELIMINARY
YONG LIANG ZHU
PTDETXO::4234

98TH AVE SE AND SE 11TH ST SLOPE STABILIZATION PROJECT

TRAFFIC CONTROL PLAN

TC01

SHT 21 OF X



TRAFFIC CONTROL NOTES

1. THE CONTRACTOR SHALL MAINTAIN 10 FOOT MINIMUM TRAVEL LANES EXCEPT DURING FINAL PAVEMENT RESTORATION.
2. ALTERNATING ONE-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES UNLESS OTHERWISE SHOWN IN THE PLANS OR APPROVED BY THE CITY.
3. TRAFFIC CONTROL PLANS HAVE BEEN PROVIDED FOR USE ON THIS PROJECT. THE CONTRACTOR SHALL SUBMIT PROJECT SPECIFIC TRAFFIC CONTROL PLANS FOR OPERATIONS THAT DIFFER FROM THE PLANS PROVIDED FOR APPROVAL BY THE CITY AT LEAST 14 DAYS PRIOR TO START OF CONSTRUCTION.
4. THE HOURS FOR CONSTRUCTION ACTIVITY, LANE CLOSURES, OR ACTIVITIES THAT IMPEDE OR MAY POTENTIALLY IMPEDE TRAFFIC SHALL BE ESTABLISHED THROUGH THE APPROVAL PROCESS FOR EACH INDIVIDUAL TEMPORARY TRAFFIC CONTROL PLAN FOR EACH SPECIFIC ACTIVITY. THE WORK HOURS SHALL BE AS STATED ON THE TEMPORARY TRAFFIC CONTROL PLAN OR SHALL BE COMMUNICATED BY THE INSPECTOR ASSIGNED TO THE PROJECT. THE HOURS FOR CONSTRUCTION ACTIVITY IN THE RIGHT OF WAY THAT DOES NOT IMPEDE TRAFFIC SHALL BE MONDAY THROUGH FRIDAY, 7:00AM TO 6:00PM.
5. PEDESTRIAN ACCESS SHALL BE MAINTAINED AT ALL TIMES AND SHALL BE NOT BE IMPEDED. CLOSED TRENCHES, TEMPORARY PAVING SURFACES AND PEDESTRIAN ROUTES SHALL HAVE A STABLE, FIRM AND SLIP RESISTANT WALKING SURFACE MADE EVEN WITH THE SURROUNDING SURFACES. COMPACTED GRAVEL IS NOT CONSIDERED AN ACCEPTABLE WALKING SURFACE.

TRAFFIC CONTROL LEGEND

- CHANNELIZATION DEVICE
- CONSTRUCTION SIGN
- WORK ZONE
- FLAGGER
- DIRECTION OF TRAVEL

W20–4

①

W20–7B

②

W20–7A

③

W20–1

④

G20–2A
B/O

⑤

	10 FEET				11 FEET				12 FEET				SHOULDER TAPERS		
	L		1/2 L		L		1/2 L		L		1/2 L		1/3 L		
MPH	MERGING	DEVICES	MERGING	DEVICES	MERGING	DEVICES	MERGING	DEVICES	MERGING	DEVICES	MERGING	DEVICES	MPH	LENGTH	DEVICES
20	70	5	35	3	75	5	40	3	80	5	40	3	20	25	3
25	105	6	55	4	115	7	60	4	125	7	65	4	25	35	3
30	150	8	75	5	165	9	85	5	180	10	90	5	30	50	3
35	205	8	105	5	225	9	115	5	245	9	125	5	35	70	4
40	270	10	135	6	295	11	150	6	320	12	160	6	40	90	4

SIGNING SPACING = X (FEET)			BUFFER DATA							CHANNELIZING DEVICE SPACING (FEET)		
URBAN ARTERIALS	35 MPH	350' +/-	BUFFER SPACE = X (FEET)									
URBAN STREETS, RESIDENTIAL & BUSINESS DISTRICTS	25 MPH	200' +/-	SPEED (MPH)	25	30	35	40	45	50	MPH	TAPER	TANGENT
										50	40	80
URBAN STREETS	25 MPH OR LESS	*100' +/-	LENGTH (FEET)	155	200	250	305	360	425	35/45	30	60
										25/30	20	40
*THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS ALL SIGNS ARE 36" X 36" BLACK ON ORANGE UNLESS OTHERWISE SPECIFIC												

SCALE IN FEET
20 0 20 40

LOCHNER

NO.	DATE	BY	APPR.	REVISIONS

C. NEAL 10/21 DESIGNED BY DATE
C. NEAL 10/21 DRAWN BY DATE
J. TUTTLE 10/21 CHECKED BY DATE

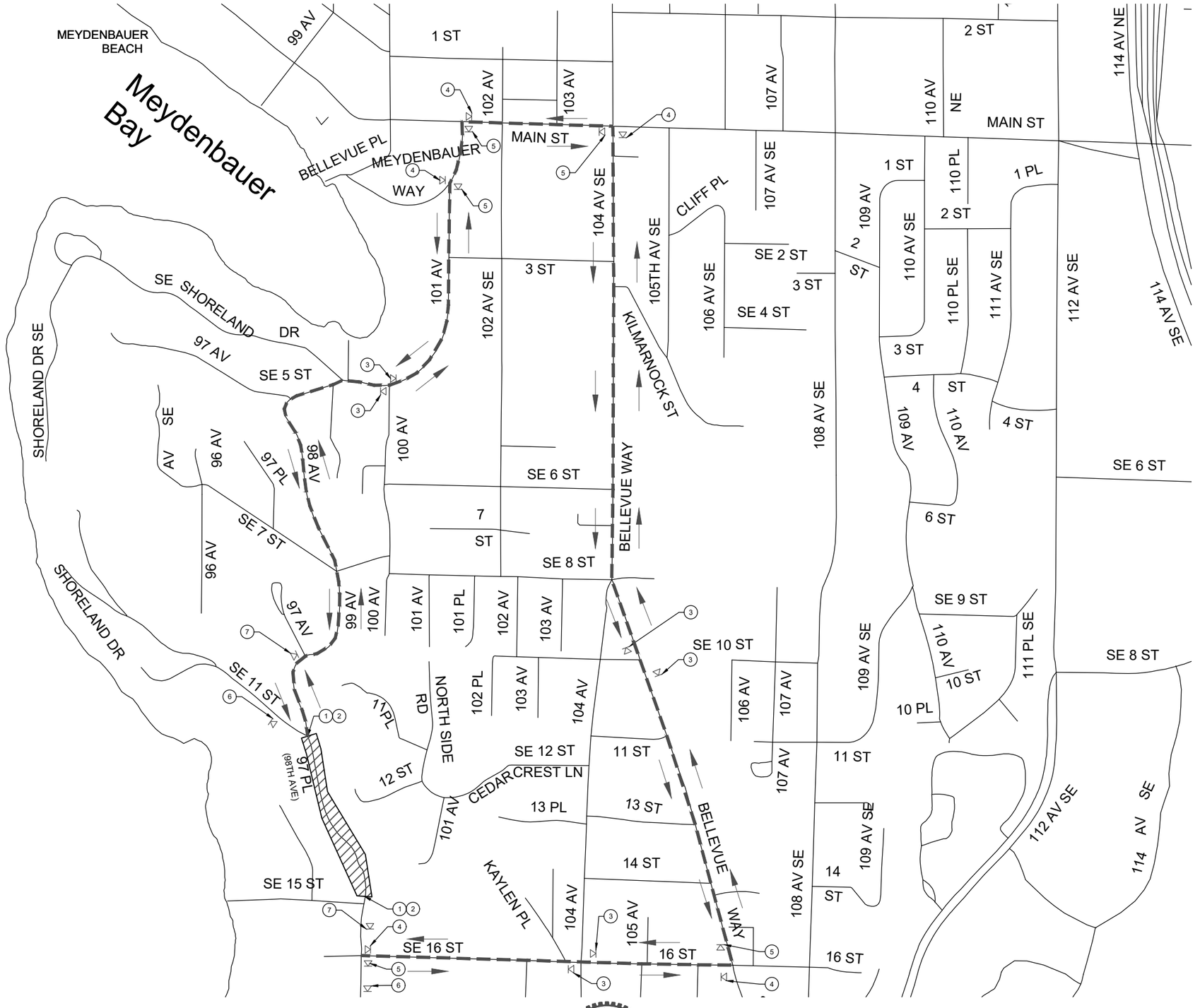
City of Bellevue
Transportation Department

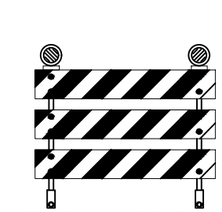
YONG LIANG ZHU
PTOE NO. 42347
STATE OF WASHINGTON
PRELIMINARY
NOT FOR CONSTRUCTION
REGISTERED PROFESSIONAL ENGINEER

98TH AVE SE AND SE 11TH ST SLOPE STABILIZATION PROJECT

TRAFFIC CONTROL PLAN

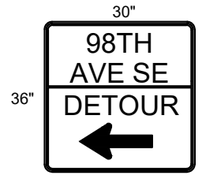
TC02 SHT 22 OF X




TYPE III BARRICADE
①

R11-1
B/O
②

M4-9 (UP ARROW)
B/O
③



M4-9L (MOD)
B/O
④

M4-9R (MOD)
B/O
⑤

W20-2
⑥

W20-3
⑦

TRAFFIC DETOUR LEGEND

- DETOUR TRAFFIC FLOW
- CONSTRUCTION SIGN
- ROAD CLOSURE AREA
- DETOUR ROUTE

NOT TO SCALE

LOCHNER

NO.	DATE	BY	APPR.	REVISIONS

C. NEAL 10/21 DESIGNED BY DATE
C. NEAL 10/21 DRAWN BY DATE
J. TUTTLE 10/21 CHECKED BY DATE

City of Bellevue
Transportation Department

YONG LIANG ZHU 42347 STATE OF WASHINGTON REGISTERED PROFESSIONAL ENGINEER
PRELIMINARY
YONG LIANG ZHU PTOE NO. 4424

98TH AVE SE AND SE 11TH ST SLOPE STABILIZATION PROJECT

DETOUR PLAN

TD01 SHT 23 OF X

TECHNICAL MEMORANDUM

THE WATERSHED COMPANY

Date:	September 14, 2021
To:	H.W. Lochner
From:	Kenny Booth, AICP; Heather Rogers, Katrina Sukola
TWC Project Number:	210131
Project Name:	98th Ave SE & SE 11th St Slope Stabilization

Subject: Critical Areas Narrative

This memo is intended to provide an overview of the 98th Avenue SE & SE 11th Street Slope Stabilization project, while also documenting how the project complies with specific City of Bellevue critical area regulations.

Description of the project site, including landscape features, existing development, and site history as applicable.

Response: The project site is located approximately 365 feet upslope of Lake Washington at the intersection of 98th Avenue SE and SE 11th Street in Bellevue, WA and includes portions of the City of Bellevue's Chism Beach Park (parcel #5627300005) and the adjacent public right-of-way. The project area consists of a paved roadway, SE 11th Street, curb, and vegetation adjacent to the road. A number of residential homes are only accessible via this stretch of SE 11th Street and adjacent 97th Place SE.

Approximately two acres around the project area were screened for critical areas. The project area is located on a steep slope. The slope exceeds 40 percent within the project area and is therefore regulated as a critical area pursuant to LUC 20.25H.120. A 75-foot setback from the toe of the slope also applies. Three Category IV depressional wetlands (Wetlands A, B and C) and one Category IV slope wetland (Wetland D) were identified within the 2 acres surrounding the project area (see separate *98th Avenue SE and SE 11th Street Slope Stabilization – Wetland and Stream Delineation Report*, June, 2021, The Watershed Company, for additional details). Two of the wetlands are in proximity to the proposed road repairs, however, due to size thresholds, neither of them have buffer requirements, thus the proposed project will not impact wetlands or their buffers.

The site has a history of land sliding and resulting road damage. The proposed project would provide needed repairs to the 98th Avenue SE & 11th Street intersection.

750 Sixth Street South | Kirkland, WA 98033
p 425.822.5242 | f 425.827.8136 | watershedco.com

A description of how the design constitutes the minimum necessary impact to the critical area.

Response: Four wetlands were identified within the 2 acres surrounding the project area (TWC 2021). Due to the location of the wetlands and the proposed road repairs (and lack of buffer requirements), no wetland buffers would extend into the area of disturbance. The project area and road damage repairs will avoid wetlands and associated buffers. The project area is however fully within steep slopes and associated buffers and setbacks. Because the purpose of the project is to stabilize a failing slope, impacts to steep slope areas cannot be avoided. However, project disturbance will be limited to the minimum necessary to construct stabilization measures, with design focusing on the least intrusive stabilization technique – a shoring wall.

A description of why there is no feasible alternative with less impact to the critical area, critical area buffer, or critical area structure setback.

Response: The goal of the project is to repair landslide damage to SE 11th Street. The chosen alternative repairs damage to SE 11th Street and avoids wetlands and their associated buffers. The steep slope located within the project area cannot be avoided. The location of the steep slope, in combination with land sliding in the project area necessitates the proposed road repairs. Alternatives to the proposed shoring wall, as described below, would result in more impacts to the steep slope and setback than the chosen alternative.

A description of alternatives considered and why the alternative selected is preferred.

Response: Alternatives considered include the following, each of which is described in detail in the NV5 geotechnical report.

- Rock Buttress: This alternative would involve extensive excavation along portions of the slope, along with significant access impacts to Chism Beach Park.
- MSE Wall and Reinforced Soil Slope: This alternative would involve extensive excavation beneath and adjacent to the roadway. Impacts to utilities, along with complete road closures would also be necessary.
- Secant Pile Wall: This alternative would involve significant drilling and greater areas of temporary impact necessary to stage large equipment.

Each of the above alternatives would result in greater temporary and/or permanent impacts to the steep slope and steep slope setback. The proposed alternative is the least impactful solution to repairing the road.

A summary of how the proposal meets each of the decision criteria contained in Land Use Code Section 20.30P.

A. *The proposal obtains all other permits required by the Land Use Code;*

Response: This narrative accompanies an application for a Critical Areas Land Use Permit (LO), with SEPA review. A Clearing and Grading Permit, Utility Extension Agreement and Right of Way Permit will also be necessary. No other permits from the City of Bellevue are expected to be necessary.

B. *The proposal utilizes to the maximum extent possible the best available construction, design and development techniques which result in the least impact on the critical area and critical area buffer;*

Response: The goal of this project is to return the project area to a state similar to pre-existing conditions following road repairs while further stabilizing the slope. Work will involve the installation of a shoring wall just downslope of the existing roadway. Work will also include restoration of portions of the slope with native trees, shrubs, and groundcover. Standard BMPs will be followed to minimize disturbance during construction, including appropriate erosion control measures. These actions will result in the minimum necessary disturbance to the critical area and setback.

C. *The proposal incorporates the performance standards of Part 20.25H LUC to the maximum extent applicable;*

Response: See below for geologic hazard area (per LUC 20.25H.125) performance standard compliance.

D. *The proposal will be served by adequate public facilities including streets, fire protection, and utilities;*

Response: The project area is currently served by adequate public facilities. The need for new services will not result from the proposed project.

E. *The proposal includes a mitigation or restoration plan consistent with the requirements of LUC 20.25H.210; except that a proposal to modify or remove vegetation pursuant to an approved*

Vegetation Management Plan under LUC 20.25H.055.C.3.i shall not require a mitigation or restoration plan;

Response: A restoration plan has been prepared in accordance with the requirements of LUC 20.25H.210. The plan (*Steep Slope Stabilization Concept Mitigation Plan,* The Watershed Company, Sept. 2021) has been submitted concurrently with this project narrative.

F. The proposal complies with other applicable requirements of this code.

Response: The proposed project complies with all other applicable City of Bellevue Land Use Codes, including LUC 20.25H.055.C.3.m which allows for the installation of 'stabilization measures'. The proposed stabilization measures would protect against landslide hazards, by stabilizing the slope and removing material from the top of the slide area. The proposed wall design will minimize impacts to adjacent slope areas and will improve slope stability over existing conditions.

20.025H.125 - Performance Standards – Landslide Hazards and Steep Slopes

A. Structures and improvements shall minimize alterations to the natural contour of the slope, and foundations shall be tiered where possible to conform to existing topography;

Response: The proposed improvements will stabilize a portion of the 98th Avenue SE and SE 11th Street right-of-way that has been, and is currently, being impacted by a landslide along the west edge of the road. Land sliding has undermined a portion of the road and slope deformation next to the right-of-way has resulted in several feet of downslope horizontal and vertical movement. The proposed shoring wall mitigation measure is limited to stabilizing the right-of-way area so that future slope movement downhill of the road will not impact the right-of-way. The wall will be constructed along the edge of the existing right-of-way, approximately 10 feet from the current paved surface. The area in front of the wall, extending approximately 15 feet in front of the wall will be excavated to create a relatively level bench to allow installation of tiebacks, and to remove material from the top of the slide to decrease driving forces causing instability. The slope area below the level bench in front of the wall will generally not be disturbed during or after construction. The area behind the wall will be filled to stabilize the right-of-way area and create a shoulder area. The proposed grading is limited to the area adjacent to the wall and will increase slope stability, by stabilizing or removing material from the top of the slide. The proposed wall will minimize impacts to adjacent slope areas and improve slope stability over existing conditions. Any area temporarily disturbed during construction will be returned to a condition similar to the pre-existing condition including restoration of the rebuilt slope and incorporation of native trees,

shrubs, and groundcover. Overall, alterations to the slope will be minimized and the natural (existing) contour of the slope will not be significantly altered.

B. *Structures and improvements shall be located to preserve the most critical portion of the site and its natural landforms and vegetation;*

Response: The proposed road repairs will stabilize the road and slope. Alterations to the slope are limited to the areas immediately adjacent to the roadway and the natural (existing) landform of the area will not be significantly altered.

C. *The proposed development shall not result in greater risk or a need for increased buffers on neighboring properties;*

Response: The proposed project will not impact wetlands or their associated buffers. The proposed project will stabilize the steep slope and road, decreasing risk to users of the roadway. No detrimental effects or increased risk to neighboring properties will occur.

D. *The use of retaining walls that allow the maintenance of existing natural slope area is preferred over graded artificial slopes where graded slopes would result in increased disturbance as compared to use of retaining wall;*

Response: The slope area below the level bench in front of the proposed wall will generally not be disturbed during or after construction. The wall will minimize impacts to adjacent slope areas and will improve slope stability over existing conditions. The proposed tied-back soldier pile wall will not limit access to the area and will minimize impacts to the slope area. This design will maintain the overall natural (existing) topography of the area.

E. *Development shall be designed to minimize impervious surfaces within the critical area and critical area buffer;*

Response: The proposed slope stabilization activities would include the placement of a total of 2,663 square feet of new permanent impervious surfaces. Approximately 350 cubic yards of fill will be added along the backside of the wall to level the area with the adjacent road. Fill will be backfill material placed behind the retaining wall and extend halfway up the retaining wall height. The fill would consist of select granular material and would be separated from general fill, native soil, and/or topsoil using a geotextile fabric. The proposed restoration activities would also include a total of approximately 3,150 square feet of native plant restoration area.

F. *Where change in grade outside the building footprint is necessary, the site retention system should be stepped and regrading should be designed to minimize topographic modification. On slopes in excess of 40 percent, grading for yard area may be disallowed where inconsistent with this criteria;*

Response: The proposed project will stabilize the steep slope and avoid topographic modification where feasible. No new buildings are proposed.

G. *Building foundation walls shall be utilized as retaining walls rather than rockeries or retaining structures built separately and away from the building wherever feasible. Freestanding retaining devices are only permitted when they cannot be designed as structural elements of the building foundation;*

Response: No new buildings are proposed.

H. *On slopes in excess of 40 percent, use of pole-type construction which conforms to the existing topography is required where feasible. If pole-type construction is not technically feasible, the structure must be tiered to conform to the existing topography and to minimize topographic modification;*

Response: No new buildings are proposed.

I. *On slopes in excess of 40 percent, piled deck support structures are required where technically feasible for parking or garages over fill-based construction types; and*

Response: No new parking or garages are proposed.

J. *Areas of new permanent disturbance and all areas of temporary disturbance shall be mitigated and/or restored pursuant to a mitigation and restoration plan meeting the requirements of LUC 20.25H.210.*

Response: Temporary and permanent project impact areas are approximately 3,150 square feet and 3,790 square feet, respectively. A restoration plan has been prepared in accordance with the requirements of LUC 20.25H.210. The plan (*Steep Slope Stabilization Concept Mitigation Plan,* The Watershed Company, Sept. 2021) has been submitted concurrently with this project narrative. The native plant restoration area totals approximately 3,150 square feet. Proposed native species include *Pseudotsuga menziesii* (Douglas-fir), *Thuja plicata* (western red cedar), *Ooemlaria cerasiformis* (osoberry), *Ribes sanguinium* (red-flowering currant), *Rosa nutkana* (nootka rose), *Rubus spectabilis* (salmonberry), *Gaultheria shallon* (salal), *Mahonia nervosa* (dull Oregon grape), and *Polystichum munitum* (sword fern). Eleven trees will be removed and replaced as part of the project. Plantings represent a diverse native plant assemblage appropriate to the eco-

region and consistent with backfill and soil stability parameters as set by the project geotechnical consultant. When accounting for project improvements, as well as the aforementioned ecological improvements, the project will result in no net loss of critical area functions and values.

20.025H.135 – Mitigation and monitoring – Additional provisions for landslide hazards and steep slopes.

A. Erosion and Sediment Control Plan. The erosion and sediment control plan shall be prepared in compliance with requirements set forth in Chapter 23.76 BCC, now or as hereafter amended. Such plans shall also include, if not otherwise addressed in Chapter 23.76 BCC, the location and methods of drainage, surface water management, locations and methods of erosion control, a vegetation management and/or replanting plan, and/or other means for maintaining long-term soil stability;

Response: An Erosion and Sediment Control Plan (Sheet SP01) has been prepared and is included in the project plan set.

B. Drainage Plan. The technical information shall include a drainage plan for the collection, transport, treatment, discharge, and/or recycle of water prepared in accordance with applicable City codes and standards. The drainage plan should consider on-site septic system disposal volumes where the additional volume will affect the erosion or landslide hazard area;

Response: A Drainage Plan has been prepared by Lochner and is included with the Critical Areas Land Use Permit submittal.

C. Monitoring Surface Waters. If the Director determines that there is a significant risk of damage to downstream receiving waters due to potential erosion from the site, based on the size of the project, the proximity to the receiving waters, or the sensitivity of the receiving waters, the technical information shall include a plan to monitor the surface water discharge from the site.

Response: With implementation of an erosion and sediment control plan and BMPs to minimize impacts to surface waters during construction, damage to downstream receiving waters is not expected to occur.

Notice of Section 4(f) *de minimis* Finding

This notice serves as an opportunity to comment on the proposal described below.

Project: 98th Ave SE and SE 11 St Slope Stablization Project

Applicant: City of Bellevue Transportation Department

Land Owner: City of Bellevue Parks and Community Services Department

Location: Intersection of 97 Pl SE & SE 11th St

Proposal

The City of Bellevue Transportation Department proposes to reconstruct of part of the intersection of 98th Ave SE (97th Place SE) and SE 11 St to stabilize an existing slope. The work includes the construction of a new wall, barrier, storm drainage improvements, watermain replacement and pavement overlay.

Section 4(f) Information:

The Federal Highways Administration proposes that this project will have a *de minimis* impact on resources qualifying for protection under Section 4(f) of the US Department of Transportation Act of 1966. Section 4(f) resources include properties eligible for listing in the National Register of Historic Places, public parks, recreation areas, and wildlife refuges. A *de minimis* impact will not adversely affect the features, attributes, or activities qualifying the properties for protection under Section 4(f). Per 23 CFR 774.5(b), this opportunity is provided to comment on the *de minimis* determination for the project described above.

Affected Section 4(f) Properties:

Chism Beach Park is a public recreational property owned by the City of Bellevue Parks and Community Services Department. The proposed project will partially be constructed within the boundaries of the existing Park. The project will impact approximately 1397 square feet of the park.

Minimization Measures:

This project is needed to preserve the existing 97th Pl SE and SE 11th Streets from ongoing movement of the existing slopes. These streets serve as the primary access to Chism Beach Park and several nearby private residences. This project will stabilize the existing slope by installing a new wall below the roadway.

Comment Period

Comments will be accepted and considered until 5:00 PM December 23, 2021.

Contact: *Chris Masek*
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425-452-4619
cmasek@bellevuewa.gov